EFFECTS OF ACTIVE REVIEW AND PANEL DISCUSSION ON STUDENTS' LEARNING OUTCOMES IN SENIOR SECONDARY ECONOMICS IN IBADAN, NIGERIA

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A DISSERTATION SUBMITTED TO THE INSTITUTE OF EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE MASTER OF PHILOSOPHY OF THE UNIVERSITY OF IBADAN, IBADAN, NIGERIA.

ABSTRACT

Economics is offered by most students in the senior secondary schools in Nigeria. However, students' performance in the subject has been poor. This development has been attributed to several factors among which are teaching methodologies. Studies have shown that teacher centered techniques employed over the years had not improved students' performance. This trend necessitated the use of student centered techniques such as active review and panel discussion among others. Hence this study investigated the effect of active review and panel discussion techniques as well as the contributions of school location and verbal ability on students' achievement in and attitude towards Economics.

The study adopted the pre-test, post-test control group, quasi-experimental design. Purposive sampling technique was used to select two Local Government Areas clustered on the basis of location (urban and rural). Simple random technique was used to select six schools and an intact class from each school. Three instruments were used: Achievement test in Economics (r = 0.84), Student Attitude to Economics Scale (r = 0.85) and Student Verbal Ability Test (r= 0.87). Active review, panel discussion and conventional instructional plans were used as teaching guides. Seven hypotheses were tested. Data were analysed using descriptive statistics (mean scores and standard deviation), Analysis of Covariance and Scheffe Post Hoc Multiple Comparison.

There was a significant main effect of active review and panel discussion techniques on students' achievement in Economics ($F_{(2,305)} = 86.61$; $p<0.05$) and attitude to Economics ($F_{(2,305)} = 252.64$; $p<0.05$) Students in the panel discussion group scored highest ($\bar{X}= 29.08$) followed by those in active review ($\bar{X}= 26.20$) in achievement, panel discussion was also highest ($\bar{X}=51.22$) followed by active review ($\bar{X}=38.47$) in attitude to Economics. There was also a significant main effect of school location on achievement and attitude ($F_{(1,305)} = 48.18$; $p<0.05$) and ($F_{(1,305)} = 19.70$; $p<0.05$). Students in the urban schools had higher mean score ($\bar{X}= 23.74$; $\bar{X}=28.21$) in Economics achievement than students from rural schools ($\bar{X}=19.09$; $\bar{X}= 24.44$) and also in attitude: urban ($\bar{X}=35.49$; $\bar{X}=44.24$) rural ($\bar{X}= 27.88$; $\bar{X} =40.38$). However, there was no significant main effect of students' verbal ability on achievement, but it had significant main effect on attitude ($F_{(2,305)} = 4.77$; $p<0.05$). Active review and panel discussion together with school location had no

significant interaction effect on achievement but there was a significant interaction effect of these teaching and learning techniques with school location on attitude to Economics ($F_{(2,305)}=14.551$; $p<0.05$)and this was higher on students in rural schools than that of urban schools students which implies that students in rural schools achieved more through the treatment than students in urban schools.The use of active review and panel discussion learning techniques engendered students' achievement in and attitude towards Economics.

Economics teachers should be encouraged to adopt these techniques in the teaching and learning processes irrespective of location of schools so as to improve students' attitude to Economics. Economics teacher's teaching methodologies should also be revised to include the use of variety of students' centered techniques.

Key words: Active review, panel discussion, Economics, school location, learning outcomes.

Word count: 495.

DEDICATION

This dissertation is dedicated to

God Almighty, the author of all goodness,

My father,

Late Alhaji Shittu Olayiwola Adeyemi,

My wife,

Mrs Ayodele ‘Joke Adeyemi

And my Daughter,

Temitope Dorcas Ayoka Oluwafunmilayo Adeyemi.

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CERTIFICATION

I certify that this work was carried out by Suraju Ajibola ADEYEMI (44304) in the International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Nigeria.

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INTRODUCTION

1.1 Background to the problem

Economics is a popular social science subject at the senior secondary school level, as it is offered by almost all students. Obemeata (1985) states that almost all students who registered for the senior school certificate examination registered for Economics with the claim that it is an interesting subject. Economics deals with the study of production, consumption and distribution of wealth. It involves the analysis of social relations, decision making and managerial effectiveness. The senior secondary school Economics curriculum (2004) states the following as the reasons for teaching Economics as a school subject:

- Economics teaches the consumer how to make rational use of scarce resources to satisfy unlimited wants.
- It provides a rational guide to the firm and government in the allocation of scarce resources.
- It helps the planners to plan for economic development.
- It helps to solve problems of what to produce, how to produce, and where to produce.
- It trains students to better understand the economic problems of society and be able to offer solutions.
- It helps for a better understanding of government economic problems.

According to the National Examinations Council (NECO) syllabus (2009), the objectives of Economics at the senior secondary school level are to enable students to acquire:

- Knowledge of basic economic principles, concepts and the tools for economic analysis;
- knowledge of the structure and functioning of economic institutions – commercial, industrial, and financial;
- understanding of the basis for national economic decision;

- ability to understand and explain the basis and structure of the West African economy, including the roles of agriculture, industry and mining, and their contribution to national income;
- ability to follow the role and status of West African countries in international economic relationships;
- Knowledge to appreciate the problems which West Africa countries encounter in their economic development.

In summary, the objective of Economics is to inculcate in secondary school students a culture of economic literacy which will enable them to apply its theoretical knowledge to real life situations. However the performance of students at the Senior School Certificate Examination (SSCE) shows that the school system has not been able to achieve these objectives (Olaoye, 2005).

Students' low performance in examinations conducted by public examining bodies over the years is a subject of great concern to all stakeholders. In the last few years, students' performance in the examinations conducted by NECO and WAEC has been consistently low and Economics is not exempted from this poor performance. Considering the general high rate of success at the inception of examinations conducted by NECO, the results of NECO June/July examinations in Economics was first considered in this study as evidence of an inconsistent pattern of achievement as shown in Table 1.1, the result of WAEC May/June examinations in Economics for the past ten years that was also considered clearly revealed a fluctuating performance, none of the years recorded an average of fifty percent credit pass as shown in Table 1.2.

TABLE 1.1: STATISTICS OF GENERAL PERFORMANCE AND ENROLMENT IN NECO SSCE ECONOMICS JUNE/JULY2000-2010

YEAR	TOTAL NUMBER REGISTERED	ACTUAL NUMBER PRESENT	NUMBER OF DISTINCTION&CREDIT &PERCENTAGE (A1-C6)	NUMBER OF PASS & PERCENTAGE (D7-E8)	NOS FAIL& PERCENTAGE (F9)
2000	845920	805814	427086 (53%)	204848 (25%)	174647 (22%)
2001	898145	831312	431203 (52%)	259059 (31%)	141050 (17%)
2002	1281630	118415	747569 (63%)	416943 (34%)	33903 (3%)
2003	897230	874576	466567 (53%)	128384 (15%)	279625 (32%)
2004	816789	786711	173529 (22%)	400289 (51%)	212893 (27%)
2005	855911	927711	270070 (29%)	460367 (50%)	190973 (21%)
2006	882958	847644	406462 (48%)	273370 (32%)	167812 (20%)
2007	908309	908171	421096 (46%)	300869 (33%)	186206 (21%)
2008	980311	949773	735924 (77%)	141273 (13%)	94979 (10%)
2009	977456	950544	293375 (31%)	420792 (44%)	236366 (25%)
2010	999876	976432	413267 (42%)	299600 (31%)	263565 (27%)

Source: NECO Statistics department, Minna, Nigeria (2011)

Table 1.1 shows the general performance and enrolment of students in Economics at NECO June/July SSCE between 2000 and 2010. It captures students' total enrolment, numbers of students that sat for Economics, those with distinction and credit, pass and fail grades. The table shows that the percentage of students with credit was between 52 and 63 in the period 2000 - 2003, but there was a sharp decline in the period 2004 - 2007, with 2004 having as low as 22% credit in Economics. There was an increase in 2008 with the record of 77% credit performance it crashed in 2009 to 31% but recorded a slight increase of 42% in 2010.

TABLE 1.2: STATISTICS OF GENERAL PERFORMANCE AND ENROLMENT IN WASCE ECONOMICS MAY/ JUNE 2000-2010

YEAR	ENROLMENT FIGURE	DISTINCTION &CREDIT	(A1-C6) %	PASS	(D7-E8) %	FAIL	(F9) %
2000	618211	214864	34.75%	210285	34.02%	193062	31.22%
2001	785807	144746	18.42%	254994	32.45%	386067	49.13%
2002	868532	193291	22.25%	394693	45.44%	280548	32.31%
2003	885807	380795	42.99%	372302	42.13%	183276	14.88%
2004	794503	303706	38.19%	307427	38.69%	183370	23.08%
2005	1028155	365242	36.24%	416044	41.28%	206654	20.20%
2006	1114065	538677	49.44%	357539	32.82%	171145	15.71%
2007	1207613	461903	39.03%	421744	35.64%	270918	22.89%
2008	1230131	592939	49.23%	392579	32.59%	201588	16.74%
2009	1262560	498767	39.50%	420792	33.32%	343001	27.17%
2010	1289876	577009	44.73%	413267	32.03%	299600	23.23%

Source: WAEC Test Development and Research Unit, Lagos, Nigeria.(2011)

Table 1.2 shows student enrolment and performance in WASCE in Economics between 2000 and 2010.The table reveals that the ten years in review did not record up to 50% credit performance, 2006 had the highest percentage of credit pass with 49.44%, followed by 2008 with 49.23%, 2010 with 44.73 and 2003 with 42.99%. 2001 recorded the lowest credit performance of 18.42% and the highest percentage of failure of 49.13%.

Babalola (2009) identifies poor state of the school system which among other things is due to inadequate funding, none responsive school curriculum and ineffective teaching methods, as probable factors responsible for general low performance of student in this millennium that demands creation of avenue by stakeholders to finding lasting ways of improving them. Teacher's teaching method seems to be prominent amongst these factors because of its potency to affect student achievement and attitude. The attitudes of students to a school subject refer to their disposition towards it. (Lawal,1998) The attitudes of students in relation to Economics could therefore be largely determined by their opinions and beliefs about Economics.

Olaoye (2005) also observes that students' low performance in the examinations conducted by public examining bodies in recent years which is largely attributed to poor teaching methods has become subject of concern both to local and international stakeholders. Despite the concern of stakeholders on students' general low level of performance at the SSCE, which also affects Economics many students still take Economics because it is considered as the gateway to social and management sciences, such as Accountancy, Business Administration and Banking and Finance.

Efforts have been made to improve the methods of teaching Economics so as to improve students' performance. For example Obemeata (1985) identifies four methods of teaching Economics. These are lecture, tutorials and seminars, field trips, and question and answer. He concludes that the question and answer method has been the most helpful in developing students' analytical reasoning skill, which is needed in understanding economic theories. However, it has been identified that among many approaches introduced by Lee (1963): only the oral or verbal approach, popularly called the lecture method, is most commonly used in the senior secondary school teaching and learning process in Economics (Frausthye, 2002). Other methods, like seminar, tutorial and field trips, have been rarely employed at the senior secondary school level owing to inadequate infrastructure (Obemeata, 1991)

Obemeata (1991) opines that some factors need to be put in place to encourage students' performance in Economics. These include teacher's qualities and teaching methods. The teaching method may make students to create interest in the subject. In other words, the

use of the appropriate teaching methods by qualified teachers is expected to enhance students' performance. Olaoye (2005) notes that teaching Economics requires painstaking efforts. He also avers that the method of teaching Economics in senior secondary school is poor as most teachers lack ethics, innovation and creativity in their approach. He cited Okebukola (2002) as affirming that teachers resort to easy teaching methods, like the lecture method which does not stimulate students' innovation, initiative, inquiry and scientific attitudes.

Forsythe (2002) claims that many students of Economics, including those specializing in the subject at single or combined honours level, experience difficulty with the method of Economics, particularly in relating abstract concepts, diagrams and models to real-world economic issues and problems'. He adds that the method of delivery or teaching is the main reason for this difficulty. Active learning strategies have been identified at the Economics Network Site as an alternative to the limitations of the traditional lecture-seminar (TLS) format. The limitations of the TLS include emphasis on giving information to students rather than making them to learn in a teacher - dominated environment in which students are spoon-fed. Second, students who, for one reason or the other, adopt a passive rather than an active role in the learning process are difficult to motivate within a TLS environment. Such a regime may do little to develop confidence and independent learning skills in students who need help in this respects, or to stimulate those who become uninterested.

Mearman, Wakeley and Webber (2008) state that there is evidence to suggest that students of Economics are finding it difficult to develop effective learning strategies and that they would welcome and benefit from the teaching of Economics within a more pluralistic framework. Obemeata (1992) also suggests that, in teaching Economics, the teacher should adopt an approach which ensures that the learner is fully involved in the teaching and learning process: In other words, the teacher must employ a learning approach that encourages students to be active learner. Prominent among these approaches is active review and panel discussion learning strategy. Malik and Khan (2006) assert that the traditional methods of teaching, such as lecture and demonstrations, which have been employed at all levels of education from ages, are obsolete. With these methods, the teacher has to play a central role, whereas the students have little involvement and participation in the teaching - learning process. These methods lay emphasis on the need for the teacher to

make preparations and impart knowledge on the students who are considered as empty vessels (Malik, 1993).

Malik and Khan (2006) observe that the inability of this old technique to motivate students for further study justifies the introduction of learning techniques like active review and panel discussion, which make students more hard working and responsible to the teachers. In other words, the teacher plays the role of a guide and facilitator in the teaching and learning process, unlike in the past routine where teachers play an active and dominant role. Chickering and Gamson (1987) state that learning is not a spectator sport; students do not learn much just by sitting in class, listening to teachers, memorizing prepackaged assignments and spelling out answers. They must talk about what they are learning, write about it, relate it to past experience, and apply it to their daily lives. They must make what they learn part of themselves.

Active learning is an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners (Bonwell and Eison, 1991). Efforts are being made to find possible means of improving students' performance in Economics. Various strategies have been suggested, and employed to improve the performance of students in Economics. However, none of these strategies gives consideration to the variables of active review and panel discussion as an active learning technique to enhance students' understanding of Economics in secondary schools. Techniques of active learning are those activities which an instructor incorporates into the teaching and learning process (Paulson and Faust, 1997).

In a study conducted by Zachariah, Geetha, and Erlane (2009) on whether using active learning strategies of student working together as a team could affect students' performance, there was a difference in the performance of students exposed to active learning and that of students exposed to the conventional method. The difference was, however, not significant. The students' attitude towards Economics communication skill and social skill is positive unlike what obtains with the conventional approach. Martin, Klein and Sullivan (2007) compared results for college students in six different versions of a computer literacy course. In some groups, instructional elements of practice with active review among others were left out. The researchers found that, in all cases, students who had engaged in active review had better performance and more positive attitudes than those students who did not have opportunities for practice or review.

Paulson and Faust (1997) assert that the lecture method is a very efficient way of presenting information but its use as the only mode of instruction presents problems for both the instructor and the students. Therefore, there is need for a wide variety of active learning techniques which can be used to supplement rather than replace lectures. They define active learning as anything that students do in a classroom other than merely passively listening to an instructor's lecture. This includes everything from listening practices which help the students to absorb what they hear, to short writing exercises in which students react to lecture materials, to complex group exercises in which students apply course material to "real life" situations and/ or new problems. Various scholars have advocated a shift from lecture - based classroom (traditional) to a more student - centered learning environment. For example, Richard and Bent (2003) opine that, in the traditional approach to higher education, the burden to communicate course materials resides primarily with the instructor; whereas, in active learning also known as student - centered instruction (SCI), some of the burden is shifted to the students. Paulson and Faust,(1997) avers that SCI is a broad approach that includes such techniques as substituting active learning experiences for lectures, holding students responsible for the material that has not been explicitly discussed in class, assigning open -ended problems and problems requiring critical or creative thinking. They also identify twenty nine techniques of active learning, which could be grouped into six categories out of which Active review and Panel discussion techniques are subset of category six titled 'student working as a team'.

McKinney (2010) avers that Active review, otherwise known as student-led review session, allows students to work amongst themselves in spontaneously formed groups. He claims to have used this strategy effectively even in classes as large as 340 students. In his student-led review session, students spend half the time working in small groups. Each student is to ask at least one question related to the material he or she doesn't understand, and to try to answer another question raised by another student. Students can also practice discussing, illustrating and applying difficult materials or concepts. For the second half of the review session, the whole class works together. Students may ask questions while other students volunteer to answer them. All students who ask or answer questions receive the instructor's acknowledgement, but he only speaks when there is a problem.

Paulson and Faust (1997) distinguish between the traditional review that is also known as Instructor-led review and the active review session. In the traditional class review

session, the students ask questions and the instructor answers them; students spend their time copying down answers rather than thinking about the materials. In an active review session, the instructor poses a question and the students work on them in groups Students are then asked to show their solutions to the whole group and discuss differences among the solutions proposed.

In line with Penner,(1984) assertions that the modification of the traditional lecture methods remain an effective way in incorporating active learning in the classroom, this study adopted Paulson and Faust's (1997) presentation on active review strategy, which is a combination of traditional lecture method and active review session. For example, in a three-period lesson per week, the first two periods will adopt the lecture method, where the instructor explains basic concepts; the students will interact with one another to study these concepts. This will make it easy for them to answer the teacher's review questions during the last period for the week, which is the active review session.

Kenneth and Gangel (2004) refer to panel discussion as another discussion teaching differing from general discussion, question and answer, and buzz groups, as shown in Table1.2 It is an instructional technique in which a group of people is chosen to discuss a topic in the presence of an audience. A properly planned panel is a small discussion group performing its discussion before an audience with the objective of giving that audience a better understanding of the subject matter. Usually, there are no prepared speeches and, in the best panels, interaction between the panel members will make up at least half of the time allotted to the panel's presentation. During that interaction, there may be agreement, disagreement and defense of various positions. Paulson and Faust (1997) argue that panel discussions are especially useful when students are asked to give class presentations or reports as a way of including the entire class in the presentation. Student groups are assigned a topic to research and asked to prepare presentations. Each panelist is then expected to make a very short presentation before the floor was opened to questions from "the audience".

Bonwell and Easton, (2010) claim that such discussion in class is one of the most common strategies promoting active learning.

Mckeache, Wilbert, Pintrich, Lin and David(1986) opine that if the objectives of a course are to promote long term retention of information, to motivate students towards further learning, to allow students to apply information in new settings, or to develop

students' critical thinking skills, then discussion is preferable to lectures. Therefore, it is expected that Economics which has a similar set of objectives as listed above, especially the aspect of developing in students the ability to apply basic economic principle to real life situations, will benefit from the discussion method.

Obemeata (1992) observers that for effective teaching of Economics in secondary school as well as healthy interactions among students, learners of Economics must be encouraged to read standard Economics textbooks. However, it has been discovered that lack of proficiency in the language of instruction is one of the major factors militating against effective learning of Economics (Logsdon,2011).This could be affected positively by the level of students' verbal ability. Oladunjoye (2004) points out that effective verbal communication in the English language is a powerful tool for conveying learning. The purpose of communication is to ensure that literacy skills and processes are developed in a meaningful context that instills the interrelationship of reading, writing, speaking and listening. Success in the discussion and presentation aspects of active review and panel discussion strategies will largely depend on the verbal communication skills of the students.

The term "verbal ability," according to Logsdon (2011) is used interchangeably with verbal intelligence, which is the ability to analyze information and solve problems using language-based reasoning. In other words, language-based reasoning, listening comprehension, auditory comprehension are all seen as integral parts of verbal ability. The ability to listen to a story and state its main idea requires verbal reasoning skills. Verbal reasoning is important in most aspects of school work. Reading and other language arts tasks require verbal reasoning skills, so also abstract courses, such as Mathematics, Economics and Physics, require verbal reasoning skills, as most concepts are either introduced orally by the teacher or introduced in written form in a textbook. The demand for Students' ability to make economic analysis by the senior school certificate syllabus which, in turn, is enhanced through effective student participation and interaction calls for verbal reasoning skills. If Economics education will be used to foster reasoned judgment in Economics, as opined by Dunning (1970), then there is a need to involve such verbal reasoning skills as ability to make inferences, evaluate arguments, interpret information, recognize assumptions and make logical deductions (Owolabi, 1996).The development of verbal ability is believed to be dependent on the learner's environment (Oladunjoye 2004).

Brembeck (1971) asserts that, in a study of environmental teaching and learning, an enriched environment stimulates verbal ability, In other words, students in an enriched environment, like urban schools are likely to demonstrate higher verbal ability skills than students in rural schools. Since both active review and panel discussion strategies encourage formal and informal interaction among students, environmental factors such as school locations (rural or urban) will have positive impact on the proficiency of their medium of communication, which is English, known also as a second language. According to Obanya (1970), less proficiency is attained if the language they are learning is not widely used in their environment. Brown (2003) assert that reasons for variations in achievement are geographical locations (rural or urban), resources, availability of technology and quality of teachers. In other words, students tend to learn and perform better in an educationally stimulating environment that is likely to arouse a higher degree of interest. Brown (2003) note that rural schools are typically less active than urban schools in the United States of America, although with some variation between states and countries. He claim that there is a large Mathematics achievement gap between rural and non-rural areas, although some rural areas are above average and others are just average. Okoye (2008) point out that, in Nigeria most rural- based schools lack enough qualified teachers, are poorly equipped and lack basic amenities, all serving as inhibiting factors to good academic performance.

1.2 Statement of the problem

Economics is offered by most students in the senior secondary schools in Nigeria. However, students' performance in the subject has been poor. This development has been attributed to several factors among which are teaching methodologies. Studies have shown that teacher centered techniques employed over the years had not improved student performance. This trend necessitated the use of student centered techniques such as active review and panel discussion among others.

Hence this study investigated the effect of active review and panel discussion techniques as well as the contributions of school location and verbal ability on students' achievement in and attitude towards Economics

. **Hypotheses**

This study tested the following hypotheses:

$H0_1$: There is no significant main effect of active review, panel discussion and lecture method on students'

i. achievement in Economics,

ii. attitude to Economics.

$H0_2$: There is no significant main effects of verbal ability on students'

i. achievement in Economics,

ii. attitude to Economics.

$H0_3$ There is no significant main effect of location on students'

i. achievement in Economics,

ii attitude to Economics

$H0_4$: There is no significant interaction effect of active review, panel discussion, lecture method and location on students'

i. achievement in Economics,

ii. attitude to Economics.

$H0_5$: There is no significant interaction effect of active review, panel discussion, lecture method and verbal ability on students'

i. achievement in Economics

ii. attitude to Economics

$H0_6$: There is no significant interaction effect of location and verbal ability on students'

i. achievement in Economics

ii. attitude to Economics

$H0_7$: There is no significant interaction effect of active review, panel discussion, lecture method , location and verbal ability on students

i. achievement in Economics

ii. attitude to Economics

1.4 Scope of the study The study is geographically limited to two out of the eleven local government areas (LGA) in Ibadan of Oyo State. The treatment used for this study was limited to two student-centered learning techniques namely the active review and panel discussion. The conventional lecture method was used as control. The two moderator variables are verbal ability and schools' geographical location.

1.5 Significance of the study

This study is of significance to various stakeholders in the education sector in Nigeria. In the first instance, it could expose students to active learning- teaching technique that will enable them to be actively involved in the teaching and learning process which will in turn lead to improved performance in Economics. Also, teachers' efficiency and effectiveness will be enhanced through the use of active learning techniques as supplementary to the old lecture method. This will enable them to encourage active involvement of all students in the teaching and learning process in Economics. Curriculum planners may also include this techniques in the Curriculum if its effects are found positive on students' achievement. Future researchers can also investigate the use of this learning technique in teaching other subjects.

1.6 Definition of terms:

1.6.1 Conceptual definition of terms:

The following terms are used conceptually in the study:

1. **Active Learning:** Active learning is an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners. Active learning is a process whereby students engage in higher-order thinking tasks, such as analysis

, synthesis, and evaluation; that is, anything that students do in a classroom other than merely passively listening to an instructor's lecture.

2. **Techniques of Active Learning**: These are those activities which an instructor incorporates into the classroom to foster active learning. These techniques are 29 in number, but which are grouped into 6. Active review and panel discussion used as treatment in this study are subsets of category six.

3. **Students working as a Team Exercise:** This covers the subset of active learning activities which students do in groups of three or more, rather than alone or in pairs. This learning technique employs more formally structured groups of students' assigned complex tasks, such as multiple-step exercises, research projects, or presentations.

4 Attitude: Attitude is a non- cognitive factor which influences learners' disposition to learn. It is not entirely innate; it could be learned. In addition, it ranges between positive and negative.

1.6.2 Operational definitions of terms:

The following terms are used operationally in the study:

1 **Learning Techniques**: These refers to various activities introduced by the teacher to aid the teaching and learning process in the classroom, in this study it includes both the use of Active Review, Panel Discussion and the Conventional Lecture method.

2 Active Review: This is a technique of active learning also known as student-led review, and it is a subset of Student Working as a Team Exercise. It is used in this study as a combination of traditional lecture method and active review session. Students are allowed to work among themselves in spontaneously formed groups to respond to the teacher's questions in Economics and present solutions to the class while the teacher gives a brief summary.

3 Panel Discussion: It is an instructional technique using different groups of students chosen to discuss selected topics in Economics in the presence of the entire class also refers to as audience. The objective is to give that audience a better understanding of the subject matter. This strategy is also used in this study as a supplement to the conventional lecture method.

4 Achievement in Economics: This is the performance of students in Economics as a subject as reflected in the immediate post-test scores obtained by students in the Achievement Test in Economics.

5 Attitude towards Economics: This is the students' opinion or frame of mind towards learning Economics as reflected by their scores in Students' Attitude towards Economics Scale (SATES) used by the researcher.

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6 **Positive Attitude:** This is the favourable evaluative feeling towards particular objects, people or situatio/n. In this study, it indicates having positive feeling, beliefs, values and interest towards Economics as a school subject.

7 Negative Attitude: This is the evaluative feeling which is less favourable towards a particular object, people or situation. In this study it is taken as students' negative feelings, beliefs, values and interest towards Economics.

8 Learning Outcomes: This refers to measurable behaviour expected from students in both cognitive and affective domains of behavior, that is, in terms of achievement in Economics test and responses to student attitude to Economics scale.

CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

2.0 **Introduction**

In this chapter relevant literature will be reviewed under the following sub-headings:

2.1 Theoretical Framework

2.2 Teaching and Learning Approaches in Senior Secondary Economics

2.3 Attitude and Learning in Economics

2.4 Student's Attitude to Economics

2.5 Active Learning Techniques: Origin and Overview

2.6 Active Review Session and Students Achievement.

2.7 Panel Discussion in Effective Teaching and Learning

2.8 Verbal Ability Active Review and Panel Discussion in Senior Secondary Economics

2.9 Effects of School Location on Students Interaction and Achievement

2.10 Appraisal of Literature Reviewed

2.11 Gaps in the Literature Reviewed

2.1 Theoretical Framework

This study is anchored on a learning theory called constructivism, which posits that learning is an active and social process of making sense of experience in terms of existing knowledge (Tobin, 1993). It also sees experience as a process of adjusting our 'mental models' to accommodate new experiences (Okebukola, 2002). It sees the learner as an information constructor. Constructivism states that learning is an active contextualised process of constructing knowledge ratio rather than acquiring it. This differs from the previous didactic approaches, such as behaviourism and programme instruction. In other words, constructivism seeks to allow individual leaner's to explore or construct knowledge based on personal experiences and hypotheses of the environment and such hypotheses are tested constantly through social negotiation. Osunnubi (2004) citing Blumer (1969), Baeurfeld (1988) and Tobin (1990) say learning is both interactive and constructive, which is the major component of active review and panel discussion learning strategies used as main treatment for this study. The social settings in which learning can occur must be such

that learners can interact among themselves in order to negotiate meaning and arrive at a consensus. They suggest active learning strategies of student working as a team in a classroom environment where the student is given direct experiences to facilitate learning. Teachers will have to 'deconstruct' classroom routines in order to incorporate constructive ideas, thereby inculcating the deconstructed routines as unconscious activities as time goes on.

Tobin (1993) asserts that a problem-solving oriented type of curriculum with students taking responsibility for their learning is recommended under constructivism. In other words, the student is regarded as central in the teaching and learning process matching his mindset with his prior knowledge to determine the context of learning and with what is learned.

Osinubi (2004), citing Edwards and Knight (1994), avers that Vygotsky's work in the 1920s and 1930s formed the basis of modern constructivism. Vigotsky posited that lasting learning occurs at two levels. The first is the social level where language and experiences are first introduced to the learner and others; the second is the intra- mental level, where the learner personally tries to make sense of the acquired knowledge by linking it with the old knowledge he already has, and tries to internalize the acquired knowledge. Edwards and Knight(1994) note that the guidance and support of the teacher is crucial at this stage, as the teacher answers the learners' questions and provides practice in the use of the newly acquired knowledge. In the case of older learners, this stage can be compared with what occurs in study group activities, such as active review session among students and individual extra reading as well as group interactions after lectures.

Edwards and Knight (1994) posit that there must be active engagement of learners as learners must learn for themselves, and hence be active. This suggests that there is a need for matching task with pupils' motivational and cognate levels. This gives rise to three task-engagements:

1. Teacher-led tasks with pupils working along with the teacher
2. Teacher-structured tasks with close teacher monitoring
3. Practice or problem- solving tasks in which new skills or concepts are used with attendant low teacher presence.

Learners should be trained to be effective learners as they learn to be painstaking and to evaluate themselves (West, Farmer and Wolff' 1991). The constructive method of teaching thus involves a detailed breakdown of the task required to be done, the sharing of processes, outcomes and goals with learners, well-planned resources so that learners are kept while maintaining autonomy. The teacher is involved in listening and working with the student' own evaluation of their work with emphasis on process and acquisition of the skills needed by successful learners, the 'how well' and 'the what' of learning. Latter constructivists such as Driver, Novak, Tobin, Glasserfield, Lorbach and others, built further on the idea that learners must be made to be actively involved in the learning process, otherwise referred to as active learners, as compared to the theory of Pedagogy (teaching) where the instructors dominate the learning process, which tends to make learners passive.

Prince and Felder (2006) note that, in social constructivism, whose principal proponents is Vygostsky, language and interactions with others, families, peers, teachers, play a primary role in the construction of meaning from experience. In other, words meaning is not simply constructed' it is co-constructed. They add that the proponents of constructivism offer variations of the following principles for effective instruction:

(i) Instruction should begin with content and experiences likely to be familiar to the students, so they can make connections to their existing knowledge structures. The new material should be presented in the context of its intended real-world applications and its relationships to other areas of knowledge, rather than being taught abstractly and out of context.

(ii) Materials should not be presented in a manner that requires students to alter their cognitive models abruptly and drastically. In Vygotsky's terminology the students should not be forced outside their "zone of proximal development." That is the region between what they are capable of doing independently and what they have the potential to do under adult guidance or in collaboration with more capable peers. They should also be directed to continually revisit critical concepts, improving their cognitive models with each visit.

(iii) Instruction should require students to fill gaps and extrapolate the material presented by the instructor. The goal should be to wean the student away from dependence on instructors as primary sources of required information, helping them to become self-learners

(iv) Instruction should involve students working together in small groups. This attribute which is considered desirable in all forms of constructivism and essential in social constructivism, supports the use of the active learning approach which includes active review and Panel discussion.

2.2 Teaching and Learning Approaches in Senior Secondary Economics

Economics as a school subject was introduced into the Nigerian secondary school curriculum in 1966 and has since then enjoyed popularity as the most preferred social science subject among senior secondary school students probably because of Granger's (1963) argument that some general knowledge of Economics is useful to any intelligent member of a society. The summarised objective of learning this subject is to inculcate in our students a culture of Economics literacy where economic concepts and abstract can be freely applied to real life situation (Obemeata, 1992)

Among other approaches introduced by Lee (1963) only the oral or verbal approach, popularly called the lecture method, has been identified as the most commonly used method in our present day secondary teaching and learning process in Economics (Frausthye, 2002). The other approaches include:

(i.) graphical approach, which is the use of graphs and tables for better classification and presentation of facts,

(ii) mathematical approach, which is used to find accurate, precise and exact solutions to problems,

(iii) activity approach, which indicates the active participation of students and teachers in the learning process and,

(iv) problem- solving approach, which simply means engaging the learners in the search for solution to a problem.

Successful learning which will result in high affective and cognitive learning outcomes is expected to be the nucleus of a healthy relationship between a teacher and a student, which depends on appropriately placed curriculum. Active review and panel discussion approaches to teaching and learning process in senior secondary school Economics are significant way of fostering student's involvement (Obemeata, 1992).It also promotes efficient learning of economic facts, concepts, principles, laws, and logic.

Despite the general notion that Economics is easy to pass (Obemeata, 1992), the low achievement rate over the years underscores the need to re-determine viable approaches to the teaching and learning process in Economics. This also supports Adegoke (2003) emphasis on the need to employ teaching and learning methods that will best facilitate higher performance among secondary school students. Teachers should see themselves as problem solvers armed with dynamic tools of all - inclusive active learning strategies that could make students respond faster to the practicality of the day- to- day economic life.

2.3 Attitude and Learning in Economics

The term "attitude" has been defined in different ways. Fisher (1997) states that the concept of attitude has had more definitions than any other concept in social psychology. Allport (1954) asserts that, at least, sixteen definitions of attitude had existed as early as 1935, yet all these definitions share a set of common features. He eventually sees attitude as a mental and neural state of readiness, organized through experience; exerting a directive or dynamic influence on the individual's response to all objects and situations with which it is related. Neale (1996) defined attitude towards a subject as an aggregated measure of a liking or disliking of the subject, a tendency to engage in or avoid activities of the subject, a belief that one is good or bad at the subject, and a belief that the subject is useful or useless. Attitudes, interests and values are central to the educative process both as ends and as means, depending on whether they are positively or negatively directed towards a particular object. Papanastasiou **(**2002) reported results of several studies that shows that there is a significant correlation between attitudes and achievement, in other words positive

attitudes of Students often enhance improved performance. This result also agreed with an earlier work by (Brustein 1992) who made a comparative study of factors influencing mathematics achievement and found out that there is a direct link between student attitudes towards mathematics and achievement. However (Ghanbarzadem 2001) and (Scott 2001) reported in their separate study that though relationship existed between student attitude and achievement but such relationship cannot be considered as definite and that using attitude alone to predict student performance is considered as weak predictor of performance. Yara (2009) sees attitudes of student towards science as their interest or feeling towards studying science.

Attitude promotes or inhibits student behaviour in the classroom, the home, and the peer group and ultimately learning and the choice of a career. Furthermore, they are considered to influence choices to attend, respond to value, participate in and make a commitment to educational activities. Olaoye (2005) citing Kraus (1995), states that considerable evidence demonstrates that attitudes play an important role in determining behaviour which is a potent tool for the determination of teaching effectiveness and the extent of student learning in Economics education. He also cites McGuile (1984) as asserting that people tend to develop attitude towards whatever they experience. Ezeokoli (1999) affirm that a relationship exists between attitude and learning, since both involve experience and behaviour change and that outcome in learning can be positive or negative owing to the fact that the basis of determining ideas and forming opinion about a subject matter involves our attitude.

2.4 Student's Attitude to Economics

Yara (2009) states that attitude of Students can be influenced by the attitudes of the teacher and his teaching methods. He further explained that teachers methods of Mathematics teaching and his personality greatly accounted for the Student positive attitude towards Mathematics and that without interest and personal efforts they can hardly passed Mathematics. This view agreed with that of Olaoye (2005) when he also stated that teacher's attitudes influence student's attitude, which has a powerful influence on learning. This means that the influence of the teacher, which can be regarded as part of the motivational factors, along with parent's religion, will also

influence the direction of student attitude either positively or negatively. The attitude of Economics students whether positive or negative will to a large extent determine the level of their performance at all levels of examinations.(Aiken,1970;Larson,1983) This is further supported by Okoye (1983) in his description of attitude as a learned predisposition to react consistently in a given manner to certain persons objects or concepts. This can either be positive or negative. Keeves (1992) asserted that students attitude towards science subject decreases as students progress in school years. He also opines that attributes like enthusiasm, respect for students and personality trait influences attitude. To put it succinctly, negative attitude inhibits learning, while positive attitude promotes learning in all disciplines including Economics. This can become noticeable by the teacher while observing class interactions amongst students during active review sessions as well as during panel presentations of assignments. This is because as students with negative attitude to Economics will tend to interact less than those with positive attitude. In the same vein, teacher's positive attitude towards Economics is more likely to enhance the achievement of goals and objectives of teaching Economics.

2.5 Active Learning Technique: Origin and Overview

As a result of the ever- increasing and maturing knowledge environment, there is great interest in research development in the area of learning methodologies when applied to active learning, which has now become the new standard by which to help students to learn (Willard,2008).

The origin of active learning technique can be traced to the work of early proponents of learning theories particularly Piaget, Vygotsky and Montessori. Willard (2008) observes that Jean Piaget shifted the dogmatic approach to teaching to a more learner- based pedagogy in which the learner's mind is engaged by interesting projects, topics and questions. Carson (1995) mentions the work of Lev.Vygotsky in the development of the "Zone of Proximal Development"(ZoPeD) it is a method which shows that with help, a learner can perform some tasks which could not have performed otherwise; it is the teacher that provides the help that supports the learner's efforts, as the learner is expected to acquire the missing skills through social interaction.

Paulson and Fraust (1997) claim that the past decade witnessed an explosion of interest in the application of these learning theories in developing a pedagogical movement and innovation aimed at providing a platform that will increase the learners propensity to learn more with less dependence on the teacher, which is generally referred to as active learning technique. They, however, caution that these techniques should not be seen as alternatives to lecture; they should rather be seen as an enhancement of the existing conventional lecture method.

There are as many active learning- teaching techniques available as there are definitions of active learning. Paulson and Fraust (1997) idetifies twenty nine of such techniques that can be grouped into six categories as shown in table 2.1

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Table 2.1: Techniques of Active Learning

Categories of Techniques in each Category

1.	**Exercises for individual student**									
	The "One Minute Paper"	Muddiest (or Clearest) Point	Affective Response	Daily Journal	Reading Quiz	Clarification Pauses				
2	**Questions and Answers The "Socratic Method"**									
	Wait Time	Student Summary of Another Student's Answer	The Fish Bowl The Fish Bowl	Quiz/Test Questions						
3	**Immediate Feed back**									
	Finger Signals	Flash Cards	Quotations							
4.	**Critical Thinking Motivators**									
	The Pre-Theoretic Intuitions Quiz	Puzzles/Paradoxes								
5.	**Share/Pair**									
	Discussion	Note Comparison/ Sharing	Evaluation of Another Student's Work							
6.	**Student working as a team**									
	Team Groups in Class	Active Review Sessions	Work at the Blackboard	Concept Mapping	Visual Lists	Jigsaw Group Project	Role Playing	Panel Discussions	Debate	Games

Source: Adapted from Paulson and Faust 1997

Table 2.1 shows different types of active learning strategies which are known to foster higher-level cognitive and affective objectives. The table also shows that both active review and panel discussions are subsets of student team work learning exercises. Few active learning definitions offered by experts in the field of active learning are given by Willard (2008)

"Active learning is an effort to make learning authentic" (Carson 1995).

"Active learning puts the responsibility of organizing what is to be learned in the hands of the learners themselves, and ideally lends itself to a more diverse range of learning styles" (Dodge 1996).

"Active learning attempts to model the methods and mindsets which are at the heart of scientific inquiry, and to provide opportunities for students to connect abstract ideas to their real world applications and acquire useful skills, and in so doing gain knowledge that persists beyond the course experience in which it was acquired (Allen and Tanner" 2003).

"Active learning refers to techniques where students do more than simply listen to a lecture. Students are doing something including discovering, processing, and applying information" (McKinney 2007).

"Active learning is comprised of a student centered environment which raises student's motivational level to stimulate thinking and go beyond facts and details" (Brody 2009).

Willard (2008) shows excitement at the birth of an approach to teaching that can offer the student an environment where his/her talents can be utilized to improve the learning process. However, he raises concern on how to overcome the hurdle of teaching the teacher the process of active learning (the pedagogy) so that the classroom functions in such a way to bring about the realization of the gains of active learning technique.

Active learning is an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners (Bonwell&Eison, 1991). The degree of the instructor's, guidance which students need while being "active" may vary according to the task and its place in a teaching unit. Kathleen and Cross (2003) view active learning to refer to techniques where students do more than simply listen to a lecture. Students are involved in discovering, processing and applying information. Active learning derives from two basic assumptions:

(i) That learning is by nature an active endeavor and

(ii) That different people learn in different ways (Meyers and Jones, 1993).

There is greater learning when students engage in active learning. It is important to remember, however, that lecture has its place and that learning should be done with

content or objectives. The elements of active learning are talking and listening, writing, reading and reflecting (Meyers &Jones, 1993). Bonwell & Elson (1991) list some characteristics of active learning:

1. Students are involved in more than listening; less emphasis is placed on transmitting information and more on developing students' skills,
2. Students are involved in higher-order thinking (analysis, synthesis, evaluation),
3. Students are engaged in activities (such as, reading, discussing and writing), and
4. Greater emphasis is placed on students' exploration of their own attitudes and values. In a study conducted by Zachariah, Geetha, and Erlane (2009) about how using active learning strategies by students working together as a team could affect students' performance, it was discovered that there was a difference in performance of students exposed to active learning compared to those exposed to the conventional method but the result was not significant; however, the students' attitude towards Economics subject, communication skill and social skill was more positive than what obtained in the conventional approach.

2.6 Active Review and Students' Achievement

Active review learning strategy is a subset of students working as a team strategy and it is also referred to as student-led review. It is used in this study as a combination of traditional lecture method and active review session, where students are allowed to work amongst themselves in spontaneously formed groups to respond to teacher's questions and present solutions to the class while the teacher gives a brief summary**.**

Mckinney (2010) argues that engaging students in active participation by responding to teacher's questions from grouped reasoned answers promotes acquisition of relevant critical and analytical thinking skill, which is needed in Economics to enhance improved performance. Students can also practice discussing, illustrating and applying difficult material or concepts, or drafting examination questions among members. Active review session, as the name suggests is a review strategy where students are allowed to respond to teacher's review questions, at the last period of the three periods per week, for Economics lectures. The whole class works together; students may ask questions while other students volunteer to answer them. All students who ask or answer questions receive a "treat" or

acknowledgement while the instructor only intervenes when there is an unresolved problem. Small classes as well as large classes have benefited from this strategy and prior information of this strategy to students helps them to adjust easily and they are less frustrated.

Paulson & Faust (1997) make a noticeable distinction between traditional review, known as Instructor led review and the active review session. They claim that in the traditional class review session, the students ask questions and the instructor answers them; students spend their time copying down answers rather than thinking about the materials. In an active review session, the instructor poses a question and the students work on them in groups after which the students are asked to show their solution to the whole group and discuss any differences among the solutions proposed.

Since the traditional lecture method where the teachers are entrusted to deliver information by playing an active role, has failed to motivate the students for further study and efforts, it is necessary to introduce such teaching techniques that will make the students more responsive.

2.7 Panel Discussion in Effective Teaching and Learning.

Pune (2010) describes panel discussion as a structured conversation on a given topic among several people in front of an audience. In other words, panel discussion can be seen as an instructional technique using a group of people chosen to discuss a topic in the presence of an audience. Kenneth and Gangel (2004) state that, although the immediate goal is to gain information from a group of experts, if there is enough time, the audience should be encouraged to interact with the panel members. This will make the panel itself to become more than just a purveyor of information but also act as a catalyst to get the group to think about the issues.

The above is further illustrated in this example: in a one-hour class period, 10 minutes should be allotted for introduction of the student and panel members, 30 minutes for the presentation and discussion by the panel and the remaining 20 minutes can be given to audience's reactions. This type of panel can draw out certain opinions and ideas on the subject under consideration rather than offering authoritative information. In any kind of panel, the room should be properly arranged so that the panel participants can look at one another while they interact and yet can easily be seen and heard by all members of the

audience. Three or four panelists are probably an ideal number. Any panel with more than five panelists would tend to make interaction an elusive goal.

Panel discussions are especially useful when students are asked to give class presentations or reports as a way of including the entire class in the presentation (Paulson and Fraust, 1997). Student groups are assigned a topic to research on and asked to prepare presentations. Each panelist is then expected to make a very short presentation before the floor is opened to question from "the audience." The key to success is to choose topics carefully and to give students sufficient direction to ensure that they are well-prepared for their presentations. You might also want to prepare the "audience" by assigning them various roles. For example, if students are presenting the results of their research into several forms of energy, you might have some of the other students play roles of concerned environmentalists, transportation officials, commuters, and so forth.

2.8 Verbal Ability, Active Review and Panel Discussion in Senior Secondary Economics.

Verbal ability can be described by as a measure of intelligence that has its principal components in reasoning and problem- solving skills. It focuses on the development of the cognitive structure necessary for logical reasoning. Obemeata (1985) considers Economics as too difficult a subject for senior secondary, as it involves deductions and abstract reasoning higher than secondary students' average age of 16. However, with the introduction of Active learning strategies, especially panel discussion, that is known to promote and develop long-term retention of information and students' critical thinking skills (Mckeache, Wilbert, Pintrich, Lin and David, 1986), students' verbal intelligence test should tap student's knowledge of Economics concepts, theories and abstract as well as assess their information processing capacities. Logsdon (2010) avers that intelligent quotient verbal reasoning is typically assessed in a full intellectual assessment of IQ. Basic verbal reasoning may also be evaluated through brief intelligence tests and language assessment. Verbal tasks may involve concepts such as concrete or abstract ideas or Internalized language-based reasoning. Verbal ability involve such skills as the ability to listen to information, understanding the meaning of written or spoken information, solving language based problems of a literacy, logical or social type; understanding the relationship between concepts and performing

language analogies or comparisons; and the ability to perform complex language-based analysis. All subjects offered by students in arts, science and social sciences such as Economics tasks, require verbal reasoning skills, as most concepts are either introduced orally by the teacher or introduced in written form in a textbook. In other words the development of literacy skill and verbal communication skill of students will enhance effective interaction that is needed before and during class presentation of the panel discussion methods as well as in various review groups of the active review sessions.

2.9 Effects of School Location on Students' Cognitive Attainment

The location of a school has a significant effect on the academic performance of the child (Sokoye, 2009). In other words, students tend to learn and perform better in educationally stimulating environments which are likely to arouse student's higher degree of interest. Although rural schools are typically less active than urban schools, variation exists between states and countries. For example, in the United States of America, there is a large Mathematics achievement gap between rural and non-rural areas but some rural areas are above average and others are just average (Brown, 2003). But, in Nigeria, most rural- based schools lack enough qualified teachers, are poorly equipped and lack basic amenities, al of which inhibit good academic performance (Okoye, 2008).

According to Onuka and Emunemu (2010), schools that have provided generations of children and young people with knowledge, skills and attitudes need to become autonomous and responsive. Schools play a vital role in developing and sustaining rural communities and are crucial to Nigeria's sustainable growth and development. According to Philips (2003), in the United States of America, 'rural' means a small town having a population of twenty-five thousand people and less, but in Nigeria, 'rural' is rather defined by the amenities available or non-existent. Such amenities include electricity, pipe-borne water, motorable roads, and health facilities, among others (Onuka and Emunemu, 2010).

2.10 Appraisal of Lliterature Review

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It had been identified from the review of literature, that amongst various approaches employed by Teachers over the years in the teaching and learning process of Secondary School Economics the oral or verbal approach, popularly known as the lecture method is most commonly used. Other teaching approaches like the graphical, mathematical, activity as well as problem solving approaches are rarely used due to inadequate infrastructural facilities in most secondary schools. Despite the use of these approaches over the years and the general notion that Economics is easy to pass (Obemeata, 1992), the low achievement rate over the years underscores the need to re-determine viable approaches to the teaching and learning process in Economics which will best facilitate higher performance and attitude among secondary school students as well. Attitude is seen as the basis of determining the basis of determining ideas and forming opinion about a subject matter. Literature also revealed that the there is great interest in research development in the area of learning methodologies when applied to active learning, which has now become the new standard by which to help students to learn (Willard,2008).

Active learning is then seen by Bonwell & Eison, (1991) as an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners which encourages a greater emphasis to be placed on students' exploration of their own attitudes and values. Active review learning strategy otherwise called student led review which is a subset of the umbrella term called active learning had been discovered in literature to promotes acquisition of relevant critical and analytical thinking skill, which is needed in Economics to enhance improved performance because it engages students in active participation by responding to teacher's questions from grouped reasoned answers which was not practice in the traditional lecture method. The lecture method where the teachers are entrusted to deliver information by playing an active role, has failed to motivate the students for further study and efforts, it is necessary to introduce such learning techniques like active review and panel discussion as sub set of active learning that will make the students more responsive which will eventually enhanced higher performance and attitude to Economics.

Panel discussion is seen in literature as an instructional technique using a group of people chosen to discuss a topic in the presence of an audience. It had also been identified to

be useful when students are asked to give class presentations or reports as a way of including the entire class in the presentation (Paulson and Fraust, 1997). Bonwell and Easton (2010) claim that such discussion in class is one of the most common strategies promoting active learning.

Mckeache, Wilbert, Pintrich, Lin and David(1986) opine that if the objectives of a course are to promote long term retention of information, to motivate students towards further learning, to allow students to apply information in new settings, or to develop students' critical thinking skills, then discussion is preferable to lectures.

Literature had also revealed that all subjects offered by students in arts, science and social sciences such as Economics tasks, require verbal reasoning skills which is the ability to perform complex language-based analysis, as most concepts are either introduced orally by the teacher or introduced in written form in a textbook. The location of a school whether urban or rural has a significant effect on the academic performance of the child (Sokoye, 2009). Rural schools are typically less active than urban schools. Schools generally play a vital role in developing and sustaining rural communities and are crucial to Nigeria's sustainable growth and development.

2.11 Gaps in the Literature Rreviewed

From literature reviewed it had been discovered that several teacher centred methods had been used to teach secondary school Economics without significant improvement in students learning outcomes, several studies had also been carried out on the desirability of the use of various models of instruction that focus the responsibility of learning on learners otherwise known as student based or active learning techniques, but effects of active review and panel discussion as techniques of active learning on students learning outcomes in Economics when used as supplement to lecture method has hardly being carried out using a quasi-experimental pre-post test design. There had been know other studies known to the researcher that investigated the effects of school location and student verbal ability on active review and panel discussion learning techniques using a quasi-experimental pre-post test design. The study therefore filled these identified gaps.

CHAPTER THREE
METHODOLOGY

3.0

This chapter addresses the research design, population, sampling procedure and sample. It also covers instrumentation and method of data analysis.

3.1 Research Design

This study adopted a pre-test and post-test control group in a quasi-experimental setting.

0_1 X_1 0_2 - Experimental (Group 1) – Active review strategy

0_1 X_2 0_2 - Experimental (Group II)– Panel discussion strategy

0_1 X_3 0_2- Control Group - Conventional lecture strategy

Where

0_1 – Pre-test measurement for each group

0_2 – Post- test measurement for each group

X_1X_2, and X_3 are the treatments that will be given.

3.2 Variables in the Study

The variables involved in the study are:

1. Independent variable: This will be treated at 3 levels
   - -Active Review strategy
   - -Panel discussion strategy
   - -Conventional lecture strategy.
2. Moderator Variables:
   There are two of such variables
   - -School location at two levels (urban and rural)
   - -Student Verbal ability at three levels (low, moderate high)
3. Dependent Variables:
   - -Students' achievement in Economics
   - -Students' attitude to Economics

3.3 Factorial Design

The structure of the 3 x 2 x 3 non-random factorial design is symbolically shown below

Table 3.1: 3 X 3 X 2 Factorial Design Structure

TREATMENT	LOCATION	VERBAL ABILITY		
		Low	Moderate	High
Active review T1	Rural			
	Urban			
Panel discussion T2	Rural			
	Urban			
Traditional method T3	Rural			
	Urban			

T1 - Active review

T2 - Panel discussion

T3 - Conventional method

Rural - School located in rural communities

Urban - School located in urban communities.

The verbal ability pre-test scores was grouped into high, medium and low using percentile rank .

3.4 Population

The target population for this study comprised all students in 270 senior secondary 11 (SS 2) schools offering Economics in all public schools in Ibadan city and Ibadan less city of Oyo State.

3.5 Sampling Procedures and Sample

Ibadan is divided into two educational zones of (city and less cities).The city zone is also referred to as zone 1, while the less city zone is referred to zone 2. This is shown in table 2.2

Table 3.2: Educational zones, Local Government Areas, Selected Local Government Areas Number of Senior Secondary Schools and Numbers of Senior Secondary Schools in Ibadan City and Less City

Educational zones	Local government areas	Selected local government areas	Nos. of senior sec. schools in Ibadan city& less city	Nos. of senior secondary schools selected in city& less city
Educational Zone 1 Ibadan City (Urban)	Ibadan North Ibadan South West Ibadan South East Ibadan North East Ibadan North West Sub total	Selected ------- ------- ------- ------- --------	60 28 26 19 09 128	3 --- --- ----- ------ ------- -------- 3
Educational Zone 2 Ibadan Less City (Rural)	Akinyele Ido Oluyole Lagelu Egbeda Ona-ara Sub total	Selected ---- ----- ----- ------ ------ ------ --------	26 15 23 22 22 20 142	3 ---- ------ ----- ----- ------- ----- -------- 3
	Total		270	6

Source: Research and Statistics Dept., Ministry of Education, Secretariat, Ibadan 2011

Purposive sampling technique was used to select two local government areas from each of the two educational zones clustered on the basis of Location. (Urban and Rural). Akinyele (rural) and Ibadan north (urban). Simple random sampling technique was used to select six secondary schools and an intact class from each school. Three each from rural and urban respectively.

One school from the urban and one from the rural locations were treated with Active Review technique; one school from urban and one from the rural locations were also treated with the panel discussion technique; one school each from both urban and rural locations were treated with the conventional lecture method. Senior Secondary School two (SSS 2) students from intact class formed each of the experimental groups. The total number of students that participated in the study was three hundred and twenty one (321),as shown in Table 3.3.

Table 3.3: Sampling Frame Work

S/n	Treatment	Name of School	Number of Students
1	Active Review	Bishop Onabanjo Senior High School (Urban)	60
		Atapa Community Senior High School (Rural)	30
2	Panel Discussion	Emmanuel Senior College (Urban)	90
		Arulogun Community Senior High School (Rural)	40
3	Control	Ikolaba Senior High School (Urban)	63
		Community Senior High School, Pade (Rural)	38
	Total		**321**

3.6 Instrumentation

The following instruments were used to gather data for the study. They were

1. Achievement Test in Economics (ATE)
2. Students' Attitude To Economics Scale (SATES)
3. Students' Verbal Ability Test (SVAT)

3.6.1 Achievement Test in Economics (ATE)

The ATE, constructed by the researcher, is a multiple choice test. It consists of sections A and B. Section A is on biodata of the students. Section B consists of an initial 75 multiple choice items with four alternatives A to D constructed from five topics in SSS2 third term curriculum. The test blueprint based on the first three levels of Bloom's taxonomy of educational objectives was constructed for the 75 items. The instrument was administered to 100 SSS2 Economics students different from those who participated in the quasi experiment. The result of the pilot study was analyzed and the psychometric properties were obtained. The items with difficulty indices that ranged from 0.41 to 0.66, and items with discriminating indices that ranged from 0.33 to 0.74 were finally selected. This reduced the

final items used to 50 from the initial 75 that was proposed as shown in table 3.4 for the table of specification and table 3.4 for Items distribution according to the Contents and Objectives respectively.

Table 3.4 Table of specification for achievement test in Economics

S/N	Content	Knowledge 50%	Comprehension 30%	Application 20%	Total
1	Production. (production possibility curve (8%)	(8,32)	(41,47)	(40,43)	6
2	Concepts of total average and marginal productivity (28%)	(7,10,13,14,19,44,48)	(21,24,38,50)	(18,31,46)	14
3	Migration of population (26%)	(6,15,23,24,28,33)	(29,30,36,39,42)	(34,49)	13
4	The demand for and supply of labour (18%)	(1,3,5,9,16)	(4,37)	(11,45)	9
5	Concepts of employment, unemployment, under employment effects of unemployment's (16%)	(2,12,17,25,26)	(22,27)	(20)	8
6	Total 100%	25	15	10	50

Table3.5: **Items Distribution according to the Contents and Objectives for Achievement Test in Economics.**

S/N	Content	Knowledge 50%	Comprehension 30%	Application 20%	Total
1	Production. (production possibility curve (8%)	2	2	2	6
2	Concepts of total average and marginal productivity (28%)	7	4	3	14
3	Migration of population (26%)	6	5	2	13
4	The demand for and supply of labour (18%)	5	2	2	9
5	Concepts of employment, unemployment, under employment effects of unemployment's (16%)	5	2	1	8
6	**Total 100%**	**25**	**15**	**10**	**50**

The items were given to test experts and Economics teachers to establish content validity from their constructive suggestions using the Lawshe formula:

CVI $= \frac{Ne - N/2}{N/2}$ was then used to calculate the content validity

Coefficient of each of the item. The average value of these coefficients was found and used as the coefficient of the instrument. The content validity coefficient was 0.63.

CVI = Content Validity Index

N_e = No of panels rating the item good

N = Total number of panels

The value of 0.84 was obtained as the reliability index of the 50 items using Kuder Richardson (KR-20) formula.

$$R = \frac{N}{N-1}\frac{\delta x2 - \sum pq}{\delta x2}$$

Where δx^2 = variance of testees' scores

P= proportion of testees that answered each item correctly.

Q= proportion of testees that answered each item wrongly.

ATE was used to obtain pre-test and post-test cognitive achievement scores. (Appendix 4).

3.6.2 Students' Attitude To Economics Scale (SATES)

This instrument aimed at measuring students' attitude to Economics and it was constructed by the researcher. It consists sections A and B. Section A is on the biodata of the students. Section B consists of thirty- five items of Likert- type scale with four options of Very True of me (VT)-4, True of me (T)-3, Rarely True of me (RT)-2, and Not True of me (NT)-1 for positively stated items. As for the negatively stated items, scores were reversed. A modified forty-five items scale was initially constructed and given to Economics teachers to determined face and content validity. This resulted in the elimination of five items found defective. The remaining forty items were trial tested at Community High School Aroro-kole, via Ojoo, Ibadan, after which they were reduced to thirty-five items which were eventually used for the study. Cronbach Alpha reliability index of 0.85 was established for the instrument.This instrument was used to obtain pre-test and post-test attitudinal scores. (Appendix 5).

3.6.3 Student Verbal Ability Test (SVAT)

This instrument was administered to determine the student's verbal reasoning level. It consists of two sections, A and B. Section A is on the biodata of the students and 8 practice questions and answer guide to answering the 35 main items. Section B is a 35-item Verbal Ability Test adopted from the Australian Council for Educational Research (ACER) High Test. The test, although foreign, has been used, modified and revalidated by Obemeata (1974), Ajiboye (1996) and Oladunjoye (2004).in order to determine the reliability of this test, it was pilot tested to 100 senior secondary school two students of Aroro-Kole community high via Ojoo Ibadan and the scores was subjected to KR 20 reliability formula and a reliability coefficient of 0.87 was obtained.

The pre-test scores obtained were used to classify students into high, moderate and low verbal ability. (Appendix 6)

3. 7 Instructional package

Three separate instructional technique modules were prepared by the researcher as guide to each instructor that participated in the experiments at the six different centers.

3.7.1 **Active Review Instructional Plan (ARIP):** Active Review Instructional plan is important since the focus of this study was to explore the benefits of student-centered teaching strategy to bring about enhanced student performance in Economics. This strategy was used as a supplement to the old lecture method; teachers were requested to explain basic concepts to students with mini active review activities in groups at the end of the first and second periods, while the third period was used for the main active review of the week's topic by the students. Active Review Instructional Plan was prepared as a guide to the teachers/instructors who participated in the quasi-experiment so as to avoid discrepancies in teaching methods. ARIP had five modules and each module consisted of a lesson guide for each week's lessons. See Appendix1

3.7.2 **Panel Discussion Instructional Plan (PDIP):** This work plan contained detailed instructional module that guided teachers on how to effectively set up spontaneous groups within each class, which would prepare presentations on previously assigned topics. It also covered five weeks, with each week having three periods of two contacts a week. The commencement of the first contact for the week was a double period of 80 minutes that adopted the old lecture method at the introduction stage where teacher explained the task ahead and made short review before the panelists' presentations. The second contact was used to prepare students for the following week's assignment and to recommend relevant materials needed for effective preparation and presentation. PDIP had five modules and each module consisted of guide for each week's lessons 1-3(Appendix 2).

3.7.3 **Conventional Lecture Method Instructional Plan (CLMIP):** This work plan was the same with the usual conventional lesson notes that the teachers are used to. It was also for five weeks. CLMIP had five modules and each module consists of guide for each week's lessons 1-3(Appendix 3).

3.8. Experiment Procedure.

The authorities of selected schools were approached for permission to use their schools for this research. Each of the three schools that were randomly selected in both rural and urban locations were assigned to one teaching strategy each. Economics teachers in each school and one research assistant per school were trained on how to administer the instrument to each treatment group during instruction and trial sessions.

Seven weeks were used for the research. The first Week were used for training the research personnel and for administering the pre-test. Five weeks were used for actual teaching exercises as treatments on the Economics students with the aid of united active learning methods given to each instructor.

Week 1—Module A—Production

Week 2-- Module B –Concepts of total average and marginal productivity

Week 3—Module C—Migration of population

Week 4—Module D—The demand and supply of Labour.

Week 5—Module E-Concepts of employment, under-employment and unemployment

The post-test on ATE and SATES was administered to students on the seventh week. Students' scores in SVAT were converted to percentages. These were used to classify students into three levels: low, moderate and high Verbal abilities. Scores on ATE were also converted to percentages and used to classify students into low, moderate and high attitude, while scores in ATE were used to classify students into low, average and high cognitive abilities in the experimental groups. There were three treatment groups: Active review learning technique, as Experimental Group 1; panel discussion learning technique, as experimental group 2; and conventional lecture technique, as control group.

Experimental group 1

Experimental group 2

Control group

3.8.1 Experimental group 1

This group was exposed to active review learning technique. Active review learning technique was used in this study as a supplementary to the traditional lecture method. Students were divided into groups of between five and ten, depending on the class size. For example there were nine groups of six students in Bishop Onabanjo Senior High, while Community High School Atapa had six groups of five students each.

There were three periods per week for Economics lesson. Students were made to sit according to their groups in each of the periods.

The first and second periods adopted a combination of lecture and active review methods where the teacher allowed the students to ask questions at the end of each lessons among themselves. For example, student in group A could ask a question on areas of the lesson not too clear while another student in group B would provide answer; the teacher simply observed the class after initial lecture of about 20 minutes.

The student's activity within the first half of the first and second periods was to listen properly and make jottings and not to struggle to write lengthy notes. The remaining half of the lesson period was for students review of the lesson among themselves with the guide of the teacher occasionally or when absolutely necessary, especially at the end of the class when he summarized and rounded off the lesson.

The last or the third period during the week was devoted to active review properly where the teacher wrote active review questions on the board and allowed the students to react to those questions in groups. The teacher ensured that all groups contributed within the lesson time frame before he concluded the lesson.

Achievement Test in Economics (ATES – Post test) was administered to all students at the end of the last modules (that is the concluding week of the experiments).

3.8.2 Experimental group 2

This group was exposed to panel discussion learning technique in Economics. The students were divided into group of five to ten students according to class size. This study also adapted this method combined with the lecture method. For example, in a class of three periods per week, there were two contacts per week; the first contact for the week was a single period of forty minutes for which partly adopted the lecture method. Students were

first divided to various groups and made to sit in groups. Then the previously learnt lesson was discussed briefly. The new task for the week was introduced; sources for materials needed for the next presentation were given. The remaining time was allotted for interactions among various groups and the entire class formed a part of their preparation for the next presentation. Here the teacher was not expected to do any form of teaching other than passing information on the text to study as well as other resource materials to be consulted for effective preparation for presentation. Students in each group were expected to interact informally with one another in and outside the school environment prior to the presentation day The second contact was a double period of eighty minutes which was used for the actual panel presentation of a previously given text or task. The first five minutes of the double period was devoted to formal interaction and preparation amongst the group members. Sixty minutes was used for presentation. The next ten minutes was used for general interaction among all groups with the guide of the teacher. The last five minutes was used for teacher's summary as he rounded off the lesson for the week the first lesson out of the three lessons for the week was devoted to introduction of the topic covered for presentation. The second and the third lesson were taken together to allow for proper presentation by all groups.

At the beginning of the lesson, five to nine chairs were arranged facing the class for the panelists to sit on. Each group made presentations and was requested to ask questions within the guide of the teacher until the last groups. The teacher gave a summary and concluded the lesson.

At the concluding week of the experiments, Achievement Test in Economics (ATES – Post-test) was administered to the students after the completion of all topics.

3.8.3 Control group

The control group was exposed to the conventional lecture method in Economics. The teacher selected topics based on the teaching module provided for five weeks. Each topic was divided along the three periods per week. At the end of each lesson, the teacher gave the students chalkboard summary.

Achievement Test in Economics (ATES) Post- test was administered at the concluding week after all the modules had been completed.

3.9 Scoring of instrument

The researcher scored the instrument thus:

ATE: Each correct item response on this instrument was awarded a score of 1, while 0 was awarded for each wrong response. The maximum score was 50, while the minimum scores was zero.

SATES: A 4 to 1 were awarded to positive statement of very true of me, true of me, rarely true of me and not true of me respectively. For negative statement the scores were reversed. The minimum score was 35, while the maximum score was 140.

SVAT: Each correct item response on this instrument was awarded a score of 1, while 0 was awarded for each negative response. The maximum scores was 35 while the minimum score was zero.

3.10 Method of data analysis

The data collected through the study were classified into pre-test and post-test scores for both experimental and control groups. Descriptive statistics was used to get the group mean scores and the standard deviation of students' performance in ATE and SATES. Analysis of covariance (ANCOVA) was used to correct the initial differences in the dependent variables and other extraneous factors, using the pre-test scores as covariance.

3.11 Methodological challenges

This study was not without its methodological challenges, which manifested in the areas of Schools authority's acceptability, schools academic programmed, accessibility to treatment schools, availability of students in rural schools , test phobia and test anxiety.

The fear of sudden disruption in a seemingly regulated school time- table with the introduction of joint examinations in Oyo State posed a great challenge for this work within the limited number of weeks for study at the third term. The researcher used his contact at each local inspectorate of education coordinating each school to persuade each school's authority on the possibilities of enhanced academic performance of students through the study.

Since the topics to be covered by the research follows the current third term curriculum of SS2 coupled with the use of Economics intact classes, the existing Economics time table in each schools was followed, except in schools where panel discussions were used as treatment. A personal arrangement was made to accommodate the double periods of the second contact with the subject teacher whose period was interchanged.

The study was conducted in both rural and urban schools. The six schools selected were distant from each other so as to ensure no filtration of treatment among schools. The major challenge was the rigor of driving to rural schools with no motorable roads and availability of teachers and students at the rural schools.

The researcher employed two research assistants for each of the three rural schools who were residents of the school communities. The first assistant was responsible for the orientation and mobilization of teachers and students. The second assistant helped each school Economics teacher to carry out the research.

It is common knowledge that most students are scared by test and examination. While students in urban schools demonstrated a higher courage, rural students exhibited some degree of test phobia and test anxiety with the evidence of deliberately running away from classes before the commencement of test at the pre test stage. This really posed a challenge. The research assistant in charge of orientation and mobilization, and the researcher spent time in re-orienting the students on the advantages the test and research would offer them secured the students' attention.

CHAPTER FOUR
RESULTS AND DISCUSSION

This Chapter presents the results of the analyzed data. It also covers the discussions on the findings based on the hypotheses already stated in chapter one of this study.

4.1 Result

4.1.1 Descriptive statistics: Pretest and post test on students' achievement in economics and students' attitude to economics mean scores by learning techniques, school location and students' verbal ability are presented below:

Table 4.1: Pre-test and post- test mean scores of Students' achievement in Economics through learning techniques.

		Pre-test		Post- test		mean
Learning techniques	**N**	**Mean**	**standard deviation**	**mean**	**Standard deviation**	**gain**
Active Review	93	20.23	3.333	26.20	2.857	5.97
Panel Discussion	130	23.42	3.325	29.08	2.478	6.66
Conventional	98	22.19	2.451	24.64	1.718	2.45

As shown in Table 4.1, Active Review had the highest mean gain score ($\bar{x}$ = 5.97) followed by Panel Discussion ($\bar{x}$ = 5.66) and Conventional Method ($\bar{x}$=2.45). The three treatment groups showed improved mean scores in the post- test, as compared to the pre-test mean scores. Panel Discussion had the highest post-test mean score ($\bar{x}$=29.08), followed by Active Review ($\bar{x}$=26.20), while the Conventional Method group had 24.64.The highest mean gain score recorded by the active review group shows that the treatment had the highest positive impart on this group, followed by panel discussion group and the conventional group respectively.

Table 4.2: Pre-test and Post test Mean Scores of Students' Attitude to Economics by Learning technique

Learning techniques	N	Pre-test		Post- test		mean gain
		Mean	Standard deviation	mean	Standard deviation	
Active Review	93	28.38	5.244	38.47	4.466	10.09
Panel Discussion	130	38.15	4.995	51.22	2.491	13.07
Conventional	96	30.03	2.913	36.03	2.566	6.00

Table 4.2 shows, Panel Discussion had the highest mean gain ($\bar{x}$=13.07) followed by Active Review ($\bar{x}$=10.09) and Conventional Method (6.00) The post- test mean scores of the three treatments were greater than the pre-test, with Panel Discussion having the highest ($\bar{x}$=51.22), followed by Active Review ($\bar{x}$=38.47), while Conventional Method had $\bar{x}$= 36.03.Panel discussion group with the highest mean gain shows that this group develop the highest positive attitude as a result of the treatment given to them, followed by active review and the conventional group respectively.

Table 4.3: Pre-test and Post test Mean Scores of Students' Achievement in Economics through Students' Verbal Ability

Learning techniques	**N**	**Pretest**		**Posttest**		**mean gain**
		Mean	Standard deviation.	mean	Standard deviation	
Low Verbal Ability	92	21.63	3.007	25.52	2.578	3.89
Moderate Verbal Ability	156	21.57	3.651	26.45	2.906	4.88
High Verbal Ability	73	23.91	2.334	29.57	2.230	5.66

Table 4.3 shows the pre-test and post- test mean scores of students' achievement in relation to students' verbal ability. The mean gain score of students with low verbal ability ($\bar{x}$=3.89) was higher than that of students with high verbal ability ($\bar{x}$=5.66), and students with moderate verbal ability ($\bar{x}$=4.28) respectively. The mean scores of the three levels of verbal ability at the post- test were higher than the pre-test scores. The mean score of students with high verbal ability at the post- test was the highest ($\bar{x}$=29.57), followed by that of students with moderate verbal ability ($\bar{x}$=26.45) and students with low verbal ability ($\bar{x}$= 25.52).The margin of increase in the mean gain recorded by student with low verbal ability was more than double the increase recorded by those with moderate and high which shows that the impact of the treatment was higher and this group had benefited tremendously.

Table 4.4: Pre-test and Post-test Mean Scores of Students Achievement in Economics by School Location

School Location	N	Pre-test		Post test		mean gain
		mean	Standard deviation	mean	Standard deviation	
Urban	209	23.74	2.496	28.21	2.681	4.47
Rural	112	19.09	2.536	24.44	2.053	5.35

Table 4.4 shows the pre-test and post- test mean scores of student's achievement in Economics in urban and rural locations. The mean gain score of rural students ($\bar{x}$=5.33) was higher than that of those in urban location ($\bar{x}$=4.47). The post- test mean scores of both urban and rural students were higher than the pre- test score. It was also observed that both the pre-test mean score ($\bar{x}$= 23.74) and the post- test mean score ($\bar{x}$=28.21) of the urban students were higher than those of the rural students ($\bar{x}$=19.27) and ($\bar{x}$ = 24.44), respectively but the higher mean gain recorded by student in rural location shows that the learning technique benefited them more than students in urban schools.

Table 4.5: Pre-test and Post-test Mean Scores of Students' Attitude to Economics by Verbal Ability.

Learning techniques	N	Pre-test		Post- test		mean gain
		mean	Standard deviation	mean	standard deviation	
Low Verbal ability	92	30.45	5.644	39.43	6.576	10.68
Moderate Verbal Ability	156	31.45	5.735	40.90	6.535	9.45
High Verbal Ability	73	38.82	4.439	57.49	3.830	12.67

Table 4.5 shows the pre-test and post-test mean scores of students' attitude to Economics by students' verbal ability. The mean gain of students with high verbal ability ($\bar{x}$=12.67) was the highest followed by that of students with low verbal ability ($\bar{x}$=10.68), and that of students with moderate verbal ability ($\bar{x}$=9.45). The mean scores at the three levels of verbal ability at the post -test were higher than those of the pre- test scores. It was also observed that both the pre-test mean score ($\bar{x}$=38.82) and the post-test mean score of students with higher verbal ability ($\bar{x}$= 38.82 and $\bar{x}$= 57.49) were the highest, followed by those of students with moderate verbal ability ($\bar{x}$= 31.45) and ($\bar{x}$=40.9); while students with low verbal ability had the lowest ($\bar{x}$=30.45) and ($\bar{x}$=39.43).This result shows that the higher positive attitude observed in students with high verbal ability as a result of the learning techniques makes them the highest beneficiary of the treatment that was given.

Table 4.6: Pre-test and Post-test Mean Scores of Students' Attitude to Economics by Location

Learning techniques	N	Pre-test		Post- test		mean gain
		mean	Standard deviation	mean	Standard deviation	
Urban	209	35.41	5.457	44.74	7.291	8.75
Rural	112	27.88	4.690	40.38	7.701	12.5

Table 4.6 presents the pre-test and post- test mean scores of students' attitude to Economics by urban and rural levels of school location. The mean gain of rural students ($\bar{x}$=12.5) was higher than that of urban students ($\bar{x}$=8.75). The mean score of the two levels of school location at the post- test were higher than the pre-test scores. Urban students' pre- test scores and post test scores ($\bar{x}$=35.49) and ($\bar{x}$=44.24) were higher than those of rural students ($\bar{x}$= 27.88) and ($\bar{x}$=40.38), respectively, but the higher mean gain of student in rural schools shows that the impact of the treatment on student attitude was more in rural schools than the urban.

4.1.2 Testing of hypotheses and Discussion of Result of the Study

Hypotheses 1(i) There is no significant main effect of learning techniques on students' achievement in Economics.

Table 4.7: ANCOVA: Effect of Learning Techniques, School Location and Students' Verbal Ability on Students' Achievement in Economics

Source	Type III sum of squares	Df	Mean Square	F	Sig	Partial Eta Squared
Corrected Model	2264.045[a]	15	150.936S	62.591	.000	.755
Intercept	1176.317	1	1176.317	487.801	.000	.615
Pretest2	160.827	1	160.827	66.693	.000	.179
Learning techniques	417.706	2	208.853	86.608	.000	.362
Location	116.180	1	116.180	48.178	.000	.136
Verbal ability3	12.874	2	6.437	2.669	.071	0.17
Learning techniques* location	12.069	2	6.035	2.503	.084	.016
Learning techniques * Verbal Ability	8.650	3	2.883	1.196	.312	.012
Location * Verbal ability	.244	2	.122	.051	.951	.000
Learning techniques *Location*Verbal Ability	.022	2	.011	.004	.996	.000
Error	735.497	305	2.411			
Total	235149.250	321				
Corrected Total	2999.542	320				

R Squared =.755(Adjusted R Squared =.743)

Table 4.7 gives a summary of the effect of learning techniques, school location and students' verbal ability on students' achievement in Economics. The table also indicates the significant main effect of learning techniques on students' achievement in Economics. It shows that, after adjustment for the covariate, Economics pre-test scores, the $F_{(2,305)}$ indicates that the main effect of treatment on students achievement in Economics was 86.608; $P < 0.05$. Since P value (0.000) was less than 0.05 alpha levels, then there is significant main effect of learning techniques on students' achievement in economics. The partial Eta squared estimated was 0.362. This implies that learning techniques accounted for 36.2 percent of the variance observed in the post- test achievement test in Economics.

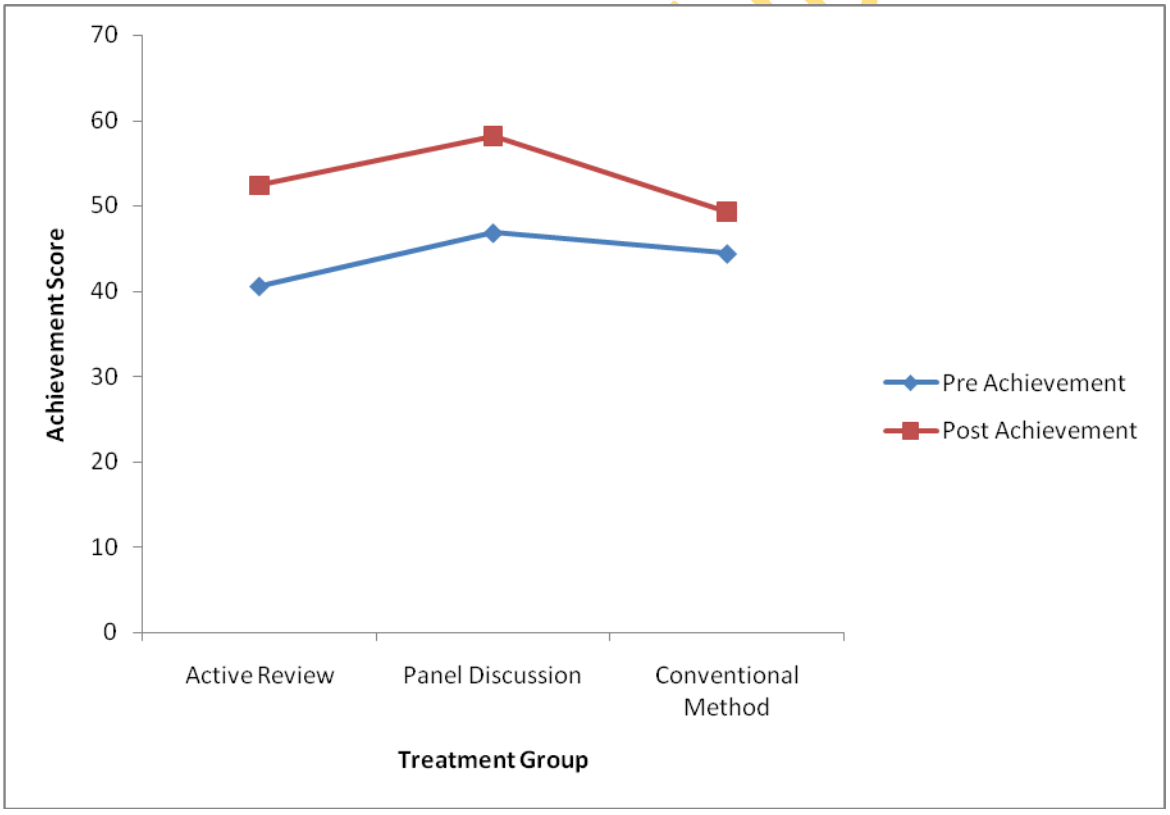

Fig. 4.1: Performance of the three groups on the pre-test and post-test in academic achievement.

Fig 4.1 above is a pictorial representation of the difference among the three study groups. Students in Active Review group had the lowest mean score in the pre-test, while students in Panel Discussion had the highest mean score. At the post- test students in the Panel Discussion group had the highest mean score while the Control group had the lowest mean score. This signifies that students in the Panel Discussion group achieved most through the treatment given to them.

Table 4.8(a): Scheffe Post Hoc Multiple Comparison of Students' Achievement in Economics

Multiple Comparisons

(I) treatment	(J) treatment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Active review	Panel discussion	-2.8895*	.23244	.000	-3.4613	-2.3178
	Control	1.5612*	.24776	.000	.9517	2.1706
Panel discussion	Active review	2.8895*	.23244	.000	2.3178	3.4613
	Control	4.4507*	.22896	.000	3.8875	5.0139
Controll	Active review	-1.5612*	.24776	.000	-2.1706	-.9517
	Panel discussion	-4.4507*	.22896	.000	-5.0139	-3.8875

Based on observed means.

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

Table 4.8(b): Scheffe Post Hoc Homogeneous Test showing the Means in the Academic Performance of the Treatment Groups

treatment	N	Subset 1	Subset 2	Subset 3
Control	98	24.6378		
Active review	93		26.1989	
Panel discussion	130			29.0885
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 2.929.

a. Uses Harmonic Mean Sample Size = 104.715.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

The result of Scheffe Post Hoc Multiple comparison on Table 4.8(a) shows that there existed a significant mean difference between the achievement of students in Active review group and those in Panel discussion. Also, the mean difference between active review and control groups was significant and the mean difference between panel discussion and control groups was also significant.

The result of Scheffe post hoc in Table 4.8(b) shows that the students that belonged to Panel Discussion had mean score of 29.08, which is significantly different from the mean scores of the other groups.Students that belonged to the Active Review group had a lower mean score of 26.19, when compared to the Panel Discussion group, while the Control group had the lowest mean score of 24.63 in Economics. The findings show that there is significant main effect of learning technique on students' achievement in Economics. The students exposed to the panel discussion learning technique performed better than students exposed to the active review learning technique and the conventional lecture method.

However, students that went through the panel discussion learning technique achieved higher than those exposed to the active review learning technique. This shows that these students achieved most through the treatment that was given to them.

Discussion

The higher level of performance observed in the panel discussion strategy agrees with findings of Bonwell and Easton (2010), that students' achievement is promoted and enhanced when they are exposed to the benefits of classroom discussion techniques like panel discussion. The findings also confirms the position of Mckeache, Wilbert, Pintrich, Lin and David (1986) that, if the objectives of a course are to promote long- term retention of information, to motivate students towards further learning, to allow students to apply information in new settings, or to develop students' critical thinking skills, then discussion is preferable to lectures. The big drive in the panel discussion technique lies in the ability of the students to relate and interact amongst them before, during and after Economics lesson. Difficult economic concepts and principles are explained amongst them as a way of increasing their knowledge and understanding on the application of these concepts and principles

Similarly the students exposed to the active review learning technique achieved higher than the students exposed to the conventional lecture method. This finding agrees with the claim of Bonwell and Elson (1991) that the use of the active review technique has a positive impact on students' achievement. However, the study of Zachariah, Geetra, and Erlane (2009) disagrees with this finding. They find out that the impact of the Active review technique on students' performance was not significant in their study.

Hypothesis 2(i):

There is no significant main effect of location on students' achievement in Economics. Table 4.7 shows that after the adjustment for the covariate the F ($_{1,305}$) indicating the main effect of location on students' achievement in Economics is 48.178: P<0.05. This implies that since P value (0.000) is less than 0.05 alpha levels, then there is a significant main effect of location on students' achievement in Economics. The result of the partial Eta Squared estimation was .136, which means that location accounted for 13.6% of the variance observed in the post-test achievement test in Economics.

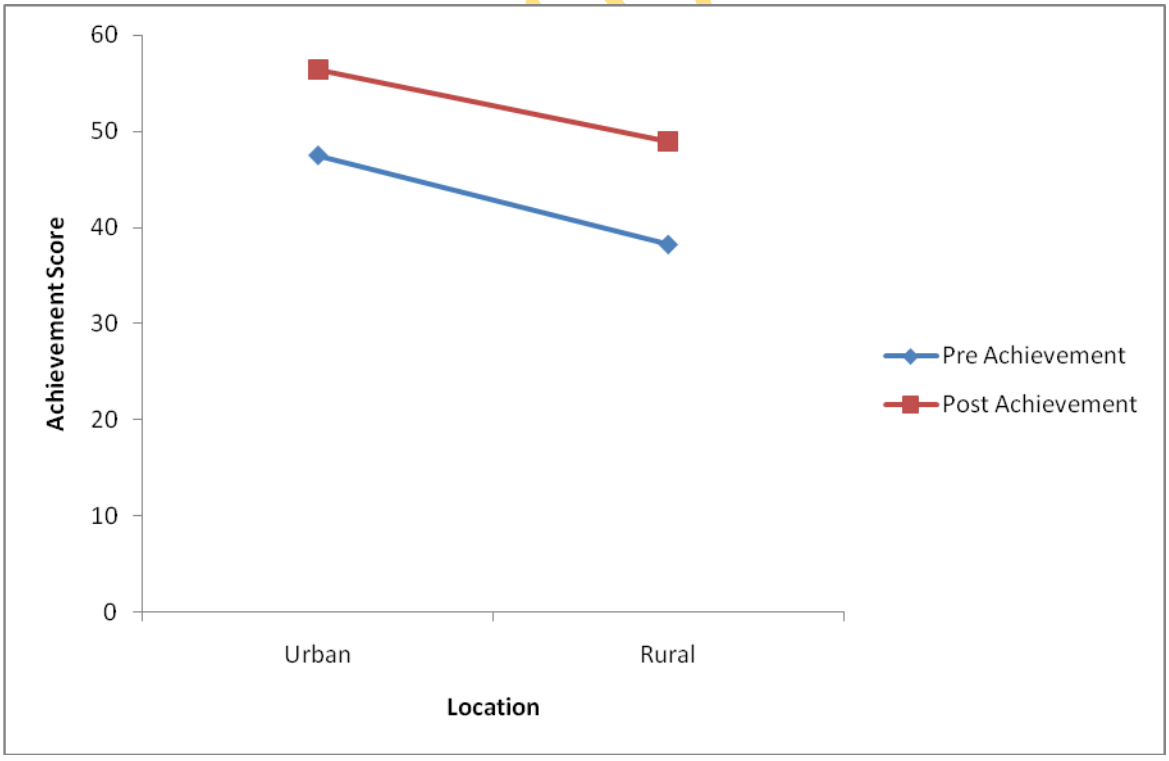

Fig4.2: Academic Performance of Urban and Rural Students in Pre-test and Post-test.

Table 4.7 indicates the main effect of location on student's academic performance in Economics. Figure 4.2, gives the picture of the difference. Students in the urban schools had higher mean score than students in the rural school in the pre-test and post-test in Economics achievement. This implies that urban students achieved more through the treatment than the rural students.

The findings show that there is significant main effect of location of Students on their achievement in Economics. The study shows that the students in the urban schools had higher mean score in the pre- test and post- test in Economics achievement than students from rural schools.

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Discussion.

This finding supports the claim of Sokoye (2009) that the location of schools has significant effect on the academic performance of students. The findings are also in consonance with the finding of Brown (2003) in a study carried out in the United State of America that the performance of the students in the urban schools was higher than that of the students in the rural schools. The finding also agree with Okoye (2008) that stated, in Nigeria, students in rural schools record lower achievement than those in urban because rural schools lack basic infrastructures that inhibits high cognitive performance. This implies that a stimulating and enriched environment in urban schools assisted urban students' higher achievement than students in rural schools.

4.1.2.3 Hypothesis 3(i):

There is no significant main effect of students' verbal ability on students' achievement in Economics

Table 4.7 shows that after adjustment the Economics pre-test for the covariate, the $F_{(2,305)}$ indicating the main effect of students' verbal ability on students' achievement in Economics is 2.669; $P<0.05$. Since P value (0.071) is greater than 0.05 alpha level, then there is no significant main effect of students verbal ability on students achievement in Economics. The partial Eta squared estimated was 0.017. The implication of this is that student verbal ability accounted for 1.7% of the variance observed in the post test achievement test in Economics, which is insignificant.

Discussion

The findings of the study show that there is no significant effect of the verbal ability level of students' on achievement in Economics. This finding disagree with Logsdon (2010),who stated that high performance in abstract courses such as Mathematics and Economics where concepts are introduced orally by the teacher or through reading of standard text book, is significantly influence by student's verbal ability. The findings also disagree with Oladunjoye (2004) who stated that students that possess effective communication skills records a general high achievement in arts and social science subject. Though the finding of this study shows Students with high verbal ability had higher mean scores in both pre-test and post-test achievement in Economics with those exposed to panel discussion learning technique having the highest mean score but the impart it makes on their academics achievement was not high enough to make significant difference in their achievement. This implies that Student can still record high achievement in Economics without necessarily possessing high verbal skills or ability

4.1.2.4 Hypothesis 1(ii):

There is no significant main effect of learning techniques on students' attitude to Economics

Table 4:9: ANCOVA: Effect of Learning Techniques, Students' Verbal Ability and School Location on Students' Attitude to Economics

Source	Type III Sum of Squares	Df	Mean Square	F	Sig	Partial Eta Squared
Corrected Model	17279.188	15	1151.946	242.641	.000	.923
Intercept	1036.975	1	1036.975	218.424	.000	.417
Pretest	906.824	1	906.824	191.010	.000	385
Learning techniques	2398.866	2	1199.433	252.644	.000	.624
Location	93.526	1	93.526	19.700	.000	.061
Verbal Ability	45.264	2	22.632	4.767	000	.030
Learning techniques *location	138.159	2	69.080	14.551	000	.087
Learning techniques * verbal ability	3.881	3	1.294	.273	.845	.003
Location *Verbal ability	21.250	2	10.625	2.238	.108	0.14
Learning techniques *location*Verbal Ability	2.260	2	1.130	.238	.788	.002
Error	1447.996	305	4.748			
Total	609250.000	321				
Corrected Total	18727.184	320				

R Squared=.923(Ad.919)

Table 4.9 presents a summarized result that shows that, after the Economics pre-test adjustment for the covariate, $F_{(2,305)}$ ratio indicating the main effect of learning outcomes on students' attitude towards Economics is 252.644; $P<0.05$. P value (.000) is less than 0.05 alpha levels, which shows that there is significant main effect of learning techniques on students' attitude towards Economics. The partial Eta squared estimated was .624. This implies that learning techniques accounted for 62.4% of the variance observed in the post-attitude score in Economics.

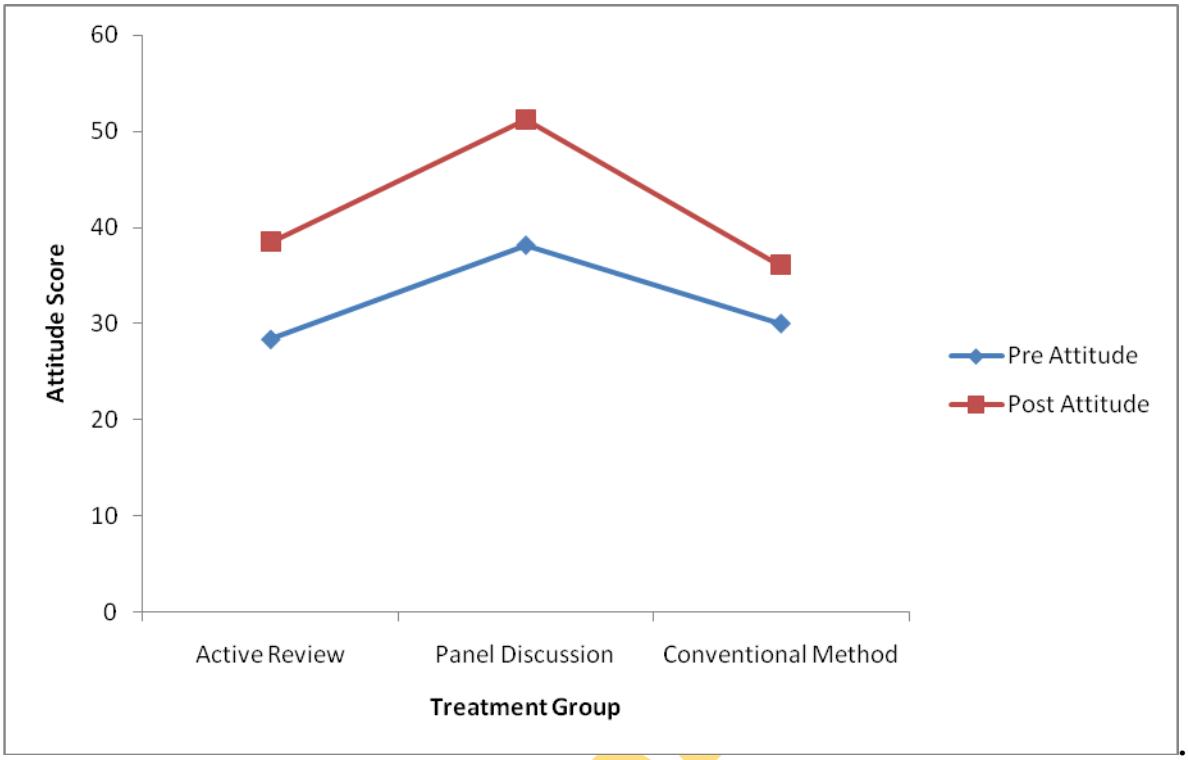

Fig 4.3; Performance of the Three Study Groups on the pre-test and Post-test in Students' Attitude to Economics.

While Table 4.9 shows the significant main effect of treatment on students' attitude to Economics, fig. 4.3 gives the picture of the difference. The Panel Discussion group achieved highest in both pre-test and post-test, followed by the Active Review group, while the Conventional group had the least achievement. This implies that the Panel Discussion group achieved more through the treatment than the rest group

Table 4.10 (a): Scheffe Post Hoc Multiple Comparison of Students' Attitudes Towards Economics

(I) Treatment	(J) Treatment	Mean Difference (I-J)	Std. Error	P
Active review	Panel discussion	-12.75*	.377	.000
	Control	2.44*	.402	.000
Panel discussion	Active review	12.75*	.377	.000
	Control	15.19*	.371	.000
Control	Active review	-2.44*	.402	.000
	Panel discussion	-15.19*	.371	.000

*= The mean difference is significant at P<0.05

Table 4.10(b): Scheffe Post Hoc Homogeneous Test showing the Means in the Students' Attitudes in the Treatment Groups

		Subset		
treatment	N	1	2	3
Control	98	36.03		
Active review	93		38.47	
Panel discussion	130			51.22
Sig.		1.000	1.000	1.000

The result of Scheffe Post Hoc Multiple comparison on Table 4.10(a) shows that there existed a significant mean difference between the attitudes of students towards Economics in Active review group and those in Panel discussion. Also, the mean difference between active review and control groups was significant and the mean difference between panel discussion and control groups was also significant. The result of Scheffe Post Hoc in Table 4.10(b) shows that the Panel Discussion group had mean score of 51.22, which is higher and significantly different from the means of the other groups. Further consideration shows that students from the Active Review group had mean of 38.47 which is also significantly different from the mean score of the Control group (36.03).

Discussion

The research findings also indicate that there is significant difference in the attitude of students exposed to the active learning technique. This finding supports the work of Zachariah, Geetha and Erlane (2009) where the attitude students towards Economics exposed to panel discussion, communication skill and social skill was more positive than that of

students exposed to the conventional lecture method. The finding of this study also support the work of Martin, Klein and Sullivan (2007) who compared results for college students in six different versions of a computer literacy course, where students who had engaged in active review had better performance and more positive attitudes than those students who did not have opportunities for practice or review.

The students exposed to the panel discussion learning technique in this study had significantly positive attitude to Economics than the students exposed to both the Active review and the conventional lecture methods while students exposed to active review learning technique had better attitude than students exposed to the conventional lecture method, this implies that the use of active learning techniques that positively improved student attitude towards Economics will help them form a better opinion of Economics as well as increase their interest and determination for a consistent high performance in Economics s

4.1.2.5 Hypothesis 2(ii)

There is no significant main effect of location on students' attitude towards economics

Table 4.9 shows the main effect of location on students' attitude to Economics. After the adjustment of Economics pre-test score the F ($_{1,305}$) ratio indicating the main effect of school location on students' attitude towards Economics is 19.700; $P<0.05$. P value (.000) is less than 0.05 alpha levels which shows that there is main significant effect of location on students' attitude towards Economics. The partial Eta squared estimated was .061. This implies that school location accounted for 61% of the variance observed in the post- attitude score in Economics.

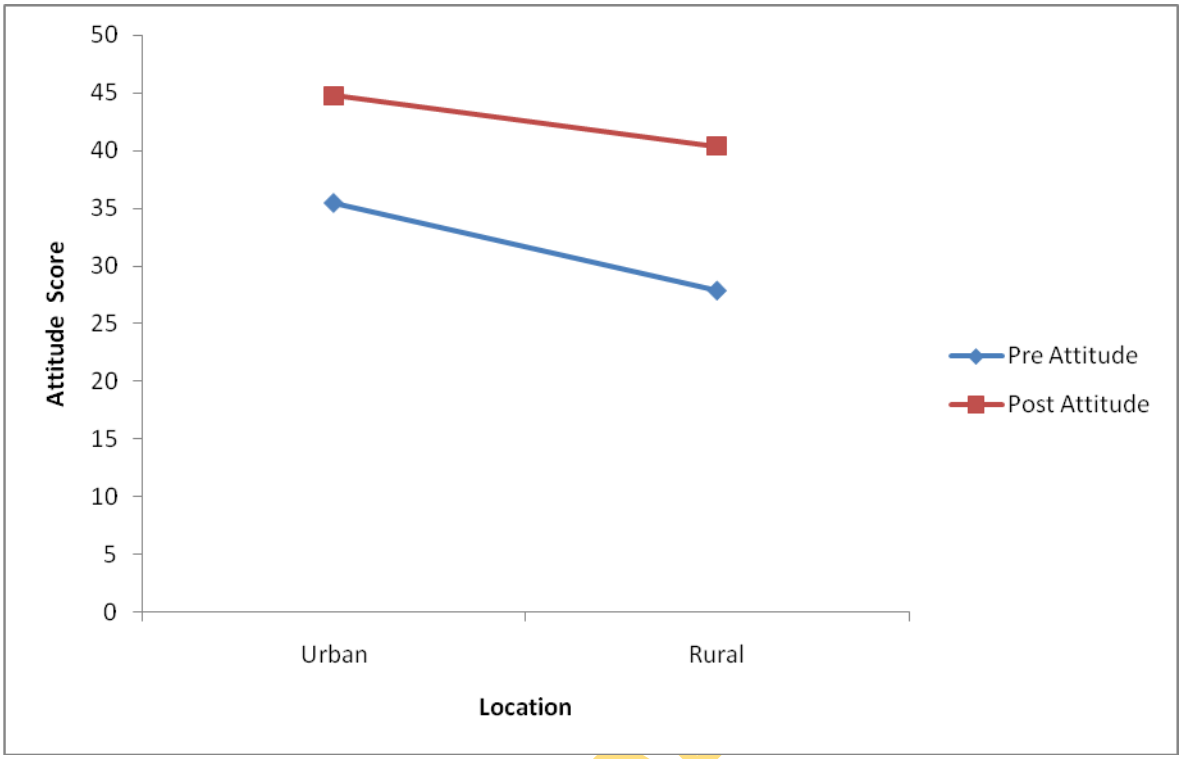

Fig 4.4; Performance of Urban and Rural Students in Pre-test and Post-test in Students' Attitude to Economics

Fig. 4.4 gives the picture of the significant difference in the mean score of urban and rural students. The mean score of urban students was higher than that of the rural students in the pre-test and the post-test on students' attitude to Economics. This implies that the urban students achieved more through the treatment than the rural students.

Discussion

It was also discovered in this study that there was significant main effect of location of the students on their attitude to Economics. This finding agrees with the opinion of Okoye, (2008) that improved infrastructure and educationally stimulating environments that is present in Nigerian urban increase student's higher degree of interest, or attitude towards Economics. The finding of this study supports the claim of Brown (2003) that students in urban schools possess varied positively in their learning outcomes than students in rural schools due to adequate resources, availability of technology and quality of teachers The study shows that students in urban schools had higher mean score in the pre-test and post-test on students' attitude to Economics. This implies that the urban students had a better attitude to Economics than the rural students. .

4.1.2.6 Hypothesis 3(ii)

There is no significant main effect of students' verbal ability on students' attitude to Economics. Table 4.9 indicates the main effect of students' verbal ability in attitude to Economics. The result presented in Table 4.9. After adjustment for the covariate Economics pre-test scores, the F ($_{2,305}$) ratio, indicating the main effect students' verbal ability on students' attitude to Economics is 4.767; P<0.05. P value (.000) is less than 0.05 alpha level. This implies that there is significant main effect of students' verbal ability on students' attitude towards Economics. The partial Eta squared-estimated was .030. This indicates that students' verbal ability accounted for 30% of the variance observed in the post- attitude score in Economics.

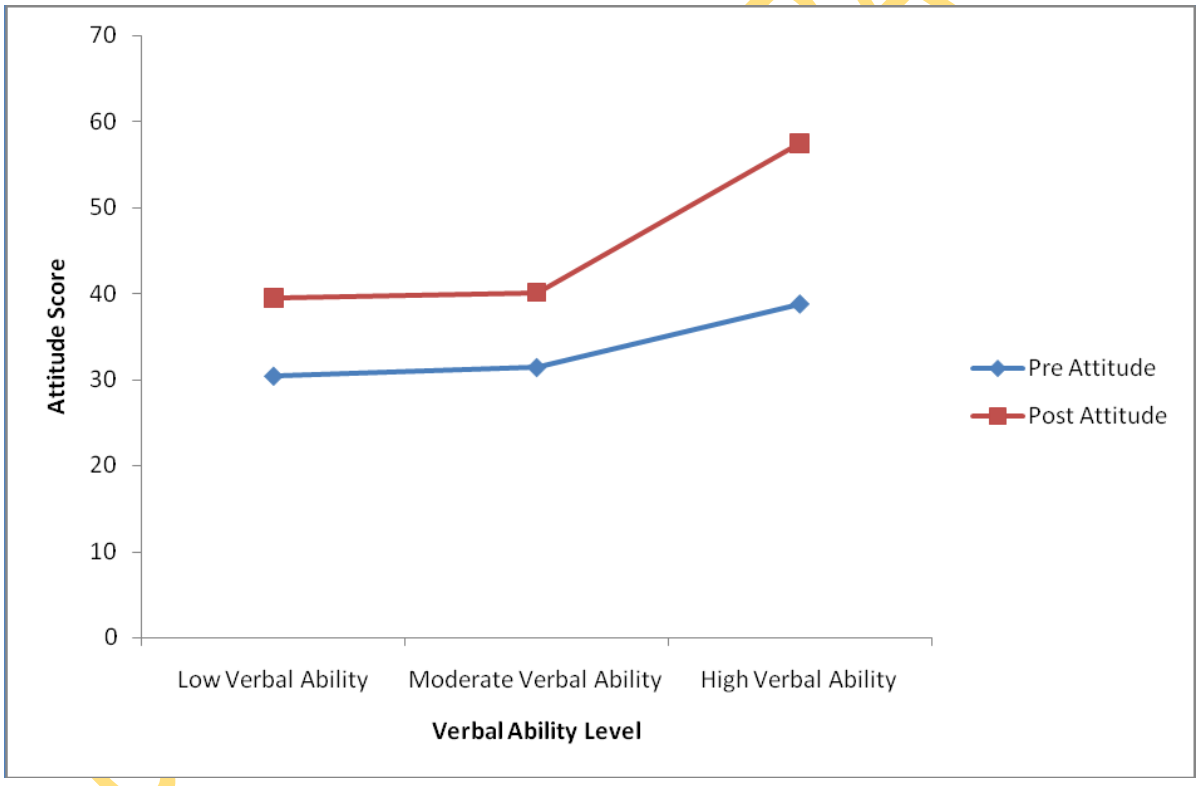

Fig 4.5: Performance of Students' with Low, Moderate and Higher Verbal Ability Level in Pretest and Posttest in Students' Attitude to Economics.

Fig. 4.5 presents the picture of the difference in mean scores of students with low, moderate and higher verbal ability. It further shows that students with high verbal ability had higher mean score than others in the pre-test and post test in student's attitude to Economics. .

Discussion

Students' verbal ability level was also found in this study to have main significant effect on students' attitude to Economics. This finding agrees with Oladunyoye's (2004) work that the level of students' verbal ability positively affects students learning outcomes, especially the affective outcomes, otherwise known as students' attitude in Economics This study also supports the work of Owolabi (1996) that involving such verbal reasoning skills as ability to make inferences, evaluate arguments, interpret information, recognize assumptions and make logical deductions in Economics significantly increase student performance. Students with high verbal ability had higher mean score than the others in the pretest and posttest in students' attitude to Economics. This implies that students with high verbal ability achieved more through the treatment than students with moderate and low verbal ability students.'

4.1.3.7 Hypothesis 4(i)

There is no significant interaction effect of learning techniques and location on students' achievement in Economics.

Table 4.7 shows that the F ($_{2,305}$) indicating significant interaction effect of learning techniques and locations on students' achievement in Economics is 2.503; P<0.05. Since P (.084) is greater than 0.05 alpha levels, it can be concluded that there is no significant interaction effect of learning techniques and location on students' achievement in Economics.

Discussion

The findings on table 4.7 that shows that there is no significant interaction effect of learning technique and school location on students' achievement in Economics implies that high variation in student post achievement mean scores was not influence by the interaction of learning techniques introduced as treatment and the student school location whether rural or urban. This is an indication that learning techniques is not sensitive to the location of school as both student in urban and rural schools recorded high achievement after the treatment, this finding disagree with the work of Okoye (2008) that student poor performance is attributed to attending school in rural areas.

4.1.3.2 Hypothesis 5(i)

There is no significant interaction effect of learning techniques and students' verbal ability on student achievement in Economics.

Table 4.7 indicates that the F ($_{3,305}$) presenting significant interaction effect of learning techniques and students' verbal ability on students' achievement in economics is 1.196; P>0.05. Since P(0.312) is greater than 0.05 alpha level, it could be concluded that there is no significant interaction effect of learning techniques and students' verbal ability on students' achievement in Economics.

Discussion

The findings of this study show that there is no significant interaction effect of learning techniques and students' verbal ability on students' achievement in Economics which indicated that the main effect of learning technique on students' achievement is not strongly influenced by whether students' verbal skill is high, moderate or low. However the findings disagree with the work of Logsdon (2010) that high proficiency in the language of communication had strong effects on students' achievement.

Economics teacher needs to ensure that all categories of student, with their varied verbal ability are exposed to these active learning techniques in order to enhance higher achievement.

4.1.3.3 Hypothesis 6(i)

There is no significant interaction effect of location and verbal ability on students' achievement in Economics

Table 4.7 is on significant interaction of school location and students' verbal ability on students' achievement in Economics. The result of F($_{2,305}$) is .051; P>0.05, since P (.951) is greater than 0.05 alpha level, it can be inferred that there is no significant interaction effect of school location and students' verbal ability on students' achievement in Economics.

Discussion

The findings of the study reveal that there is no significant interaction effect of location and verbal ability level on students' achievement in Economics. This study disagree with Oladunjoye (2004) claims that the development of verbal ability is believed to be dependent on the learner's environment which will consequently affects learning outcomes.

The interaction of these two moderator variables failed to affect students' achievement. This shows that improvement in performance of students as seen in their post test mean scores is strongly dependent on the efficacy of both active review and panel discussion learning techniques introduced as treatment.

4.1.3.4 Hypothesis 7(i)

There is no significant interaction effect of learning technique, location and verbal ability on students' achievement in Economics.

Table 4.7 shows that the F ($_{2,305}$) indicating significant interaction effect of learning techniques, location and students' verbal ability on students achievement in Economics is .004; P>0.05. Having considered .996 to be greater than 0.05 alpha levels, it could be concluded that there is no significant interaction effect of learning techniques, location and verbal ability on students' achievement in Economics.

Discussion

The higher level of students' achievement in Economics observed as a result of treatment in this study did not depend on both school location and students' verbal ability level. This finding disagrees with the work of Brown (2003) that high academic achievement is strongly influenced by school location. This finding also disagree with the work of Logsdon (2010) that student verbal ability has positive effect on student achievement in Economics. It is thus recommended through the finding of this study that Economics teacher should therefore give opportunities to all categories of Economics students so that they are exposed to active learning techniques of active review and panel discussion, especially when treating difficult economic concepts, principles and theories.

4.1.3.5 Hypothesis 4(ii)

There is no significant interaction effect of learning techniques and school location on students' attitude to Economics.

As shown in Table 4.9, the result of F ($_{2,305}$) on the significant interaction effect of learning techniques and school location on students' attitude to Economics is 14.551; P<0.05. P (.000) is less than 0.05 alpha levels. This implies that there is significant interaction effect of learning techniques and location on students' attitude to Economics.

Discussion

The finding of this study reveals that there is significant interaction effect of learning techniques and school location on students' attitude to Economics. This finding indicates that the interaction effect of treatment on students in rural schools is higher than that of urban schools in both the pre-test and post-test of students' attitude to Economics as shown on fig.

4.6. It can, thus, be inferred that the communal settings and interpersonal relationship that existed in most rural communities assisted the rural students interaction with the learning techniques introduced as treatment.

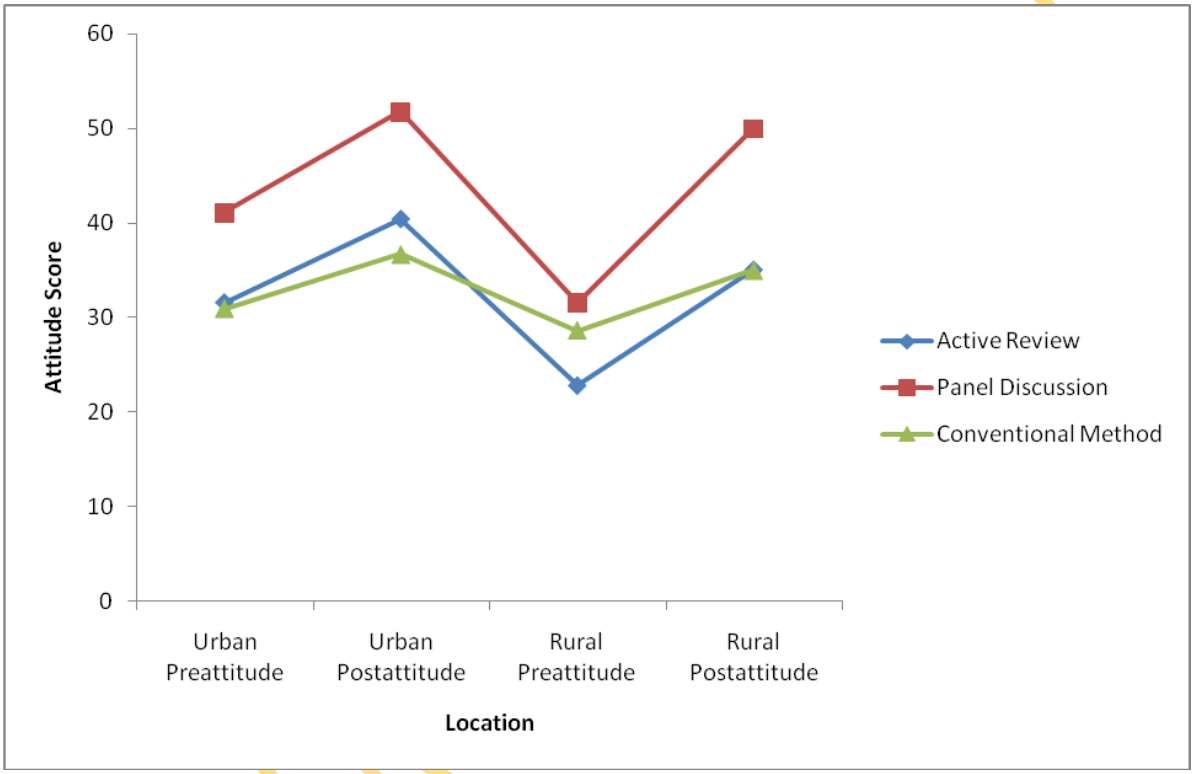

Fig.4.6: Interaction Effect of Treatment and School Location on Students' Attitude to Economics

Table 4.9 indicates the interaction effect of treatment and school location on students' attiude to Economics, while fig. 4.6 gives the picture of the interaction effect.The figure shows that the interaction effect of treatment on students in rural shools is higher than that of the urban school in both the pre-test and post-test of students' attitude to Economics.This implies that students in rural locations achieved more through the treatment than students in urban location. This finding thus agree with the work of Brown (2003) that performance of Student in rural schools exposed to high quality of instruction performs higher than some student in urban schools in some states in America, this implies that student in rural schools where low performance is being recorded as a result of poor infrastrure (Okoye,2008) has the

potentials of high performance hen exposed to high quality of instruction or student centered learning techniques like the active review and panel discussion.

4.1.3.6 Hypothesis 5(ii)

There is no significant interaction effect of learning techniques and students' verbal ability on students' attitude to Economics.

Table 4.9 shows that the $F_{(3,305)}$ indicating interaction effect of learning techniques and students' verbal ability on students' attitude to Economics is .273; P>0.05. Since the P(.845) is greater than 0.05 alpha level, it could be inferred that there is no significant interaction effect of learning techniques and students' verbal ability on students' attitude to Economics

Discussion.

The finding of this study show that there was no interaction effect of learning technique and students' verbal ability on students' attitude to Economics. This findings disagree with the work of Logsdon (2010) that states student verbal intelligence skills has a significant influence on student learning outcomes. It had thus been discovered through the result of this study that the improvement noticed in students' attitude to Economics caused by learning techniques does not necessarily depend on students verbal reasoning skills, as each category of students is expected to develop positive attitude to Economics whether low, moderate and high ability.

4.1.3.7 Hypothesis 6(ii)

There is no significant interaction effect of location and student verbal ability on students' attitude to Economics.

As shown in Table 4.9, the result of the F $(_{2,305})$ indicating the significant interaction effect of school location and student verbal ability on students' attitude to economics is 2.238; P>0.05. Since P (.108) is greater than 0.05 alpha levels, it can be concluded that there is no significant interaction effect of school location and student verbal ability on students' attitude to Economics.

Discussion

The findings also show that students' attitude to Economics is not affected by the interaction of the location of school whether (rural or urban) and students' verbal ability level. This finding disagrees with the work of Oladunjoye (2004) that student in urban schools who learn in enriched environment develops higher verbal ability than student in rural schools. The finding of this study implies that the positive change in student attitude to Economics observed in this study is not dependent on the interaction of students' location and their verbal ability levels.

4.1.3.8 Hypothesis 7(ii)

There is no significant interaction effect of learning techniques, location and verbal ability on students' attitude to Economics.

Table 4.9 shows that the $F_{(2,305)}$ indicating the interaction effect of learning techniques, school location and students' verbal ability on students' attitude to Economics is .238; P>0.05. Since P (.788) is greater than 0.05 alpha levels, it could be inferred that there is no significant interaction effect of learning techniques, school location and students' verbal ability on students' attitude to Economics.

Discussion

The finding of this study that shows that the three way significant interaction of learning technique, verbal ability and location of school did not significantly affect student attitude disagree with the work of Brown (2003) that student learning outcomes is strongly influenced by school location in some states in the United States of America. This finding also disagree with the work of Logsdon (2010) that student verbal ability affects student general performance in Economics. There is a need for Economics teacher, therefore, to make use of the gain of this study to improve performance of Economics students' as they give equal opportunities to all categories of Economics students to learn through the use of Active learning techniques like the active review and panel discussion.

CHAPTER FIVE

SUMMARY OF FINDINGS, IMPLICATIONS, CONCLUSION AND RECOMMENDATIONS

This chapter presents a summary of the findings and the educational implications of the study. It also present conclusion with suggestions for further studies, recommendations based on findings of the study as well as limitation for further studies.

5.1. Summary of findings

The findings of this study are summarized below:

1. There was significant main effect of learning techniques (Active review strategy, panel discussion strategy and the conventional method) on students'
   - i achievement in Economics
   - ii attitude to Economics

2. There was significant main effect of school location on students'
   - i. Achievement in Economics
   - ii. Attitude to Economics

3. There was no significant main effect of verbal ability on students'
   - i. Achievement in Economics
   - ii. Attitude to Economics.

4a. There was no significant interaction effect of learning techniques and school location on students' achievement in Economics

4b. There was significant interaction effect of learning techniques and school location on students' attitude to Economics.

5. There was no significant interaction effect of learning techniques and students' verbal ability on students'
   - i. Achievement in Economics
   - ii. Attitude to Economics.

6 There was no significant interaction effect of school location and students' verbal ability on students'
   - i. Achievement in Economics
   - ii. Attitude to Economics.

7 There was no significant interaction effect of learning techniques school Location and verbal ability on students'

i. Achievement in Economics

ii. Attitude to Economics.

5.2 Educational implications

The finding of this study on the effect of active review and panel discussion as learning techniques on senior secondary students' achievement in Economics and attitude to Economics will have several implications for major educational stakeholders in the education industry. These stakeholders include the students, secondary school teachers, school administrators and policy makers.

5.2.1 Students

Economics students should avail themselves of the opportunities presented to them with the introduction of active learning techniques to boost their understanding of how to apply economic concepts to their day- to- day realities which scholars has identified as a major problem inhibiting their academic performance in Economics and demonstrate a positive attitude to the study of Economics.

Active review strategy provides students with the opportunity for greater learning, as they actively engage in answering teachers' review questions amongst themselves by exploring their own attitudes and values to the study of Economics. This will enhance both higher academic achievements and development of a consistent positive attitude to economics.

Panel discussion, which significant effect ranks highest, as seen in its mean gain also provides students with opportunities to draw out certain opinions, ideas and concepts in Economics amongst themselves, rather than receiving teacher's authoritative information. This strategy had proved to be more effective in this study. This means that even an average student can freely discuss and apply various economic concepts and theories to his/her daily economic realities.

5.2.2 Teachers

There is the need for teachers to embrace the use of modern active learning techniques. Teachers should de- emphasize the use of the conventional or traditional lecture method, which only makes students passive learners.

Both the active review and panel discussion strategies should challenge Economics teachers to make wide textual consultation before introducing Economics topics. This will enable them give effective guidance to students who have been exposed to numerous sources of information on any given topic at their formal or informal interactive sessions before the class review or presentation. Teachers effective teaching skills will be enhanced through this, as teachers are made to study and follow current economic trends in order to know better than their students, especially those in the urban areas.

5.2.3 School administrators and policy makers

The outcome of this study could encourage school administrators and policy makers to accommodate the use of active learning as a major learning strategy in secondary schools. They should create an enabling environment that will promote the use of the active learning techniques, especially in the area of allocating appropriate time preferably double periods on the school time-table. This will give students enough time for interaction during Economics classes.

Administrators should organize and allow Economics teachers to attend in-service training on active learning strategies that will, in turn, assist teachers develop higher professional skills in the teaching and learning process. Educational policy makers should provide educational learning facilities and resources, including well -equipped libraries and cybercafés that will give students access to books and the internet service during preparation for panel presentations.

5.3 Conclusion

Economics is considered the most popular elective Social Science subject offered by many senior secondary school students in Nigeria. A careful review of students performance in public examination (for example NECO examinations) between 2000 and 2010 shows students inability to score up to 50% credit pass in at least five years, with 2004 recording as low as 22% student credit pass. Previous research had linked student low performance in public examination to ineffective teaching and learning process in our schools, among other factors. The age- long method of teaching, otherwise referred to as lecture method did not improve students' performance. This created a need to employ a student learning strategy known to have improved students' performance, called active learning technique. This study investigated the effect of two active learning technique (active review and panel discussion) in senior secondary schools teaching outcomes in Economics. Active review and panel discussion are subset of active review technique.

The issues involved in active review and panel discussion learning to improve students' performance should be given appropriate attention. Panel discussion technique which allows students interactions within and outside the classroom prior to class presentation in groups, has proved to be very effective in the teaching and learning of Economics. This technique allows a higher students' involvement in the teaching and learning of Economics. This improved students' attitude towards Economics as a secondary school subjects.

The use of active review technique, where students were made to actively review among themselves lessons taught by the teacher through review questions was also confirmed adequate in this study. This reflected in students' improved performance both in achievement and attitude.

It could thus be concluded from study that both panel discussion and active review technique are effective in improving both students' achievement in Economics and their attitude to Economics. This learning technique, otherwise known as student- centered technique gives room for students to interact and exchange ideas while brainstorming teacher's review questions. It also allows them in making preparation for group presentations of already given topics. This interaction fosters greater learning of difficult economic

The use of active review and pa nel discussion enhanced students' performance in and attitude to Economics. These technique should, therefore, be used by Economics teachers along with the existing lecture method in order to improve students' learning outcomes in Economics.

5.4. Recommendations

In view of the findings of this research, the following recommendations are made:

i Economics teachers should be encouraged to adopt active review techniques and panel discussion as supplement to the regular lecture method in the teaching and learning process irrespective of locations of schools so as to improve student achievement in and attitude to Economics.

ii The use of panel discussion should be encouraged in all senior secondary schools, especially in relating economic concepts and principles with daily realities. This will assist students in developing a positive attitude to Economics, which will eventually lead to higher achievement.

iii Economics students should also be encouraged to convert the gains of panel discussion learning techniques to opportunity for developing healthy academic interactions amongst their various groups as well as developing effective communication skills, otherwise known as verbal ability, all of which will lead to higher academic performance.

iv. Economics curriculum should also be revised to include the use of variety of student centered techniques especially panel discussion in order to improve student achievement in and attitude towards Economics.

v. Policy makers are to ensure enabling classroom environment that will make group work and panel presentation less cumbersome but more interesting. This will encourage student's classroom optimal performance and overall higher learning outcomes.

vi. Considering the gains of active learning technique, policy makers should inspire classroom instructors to develop a positive disposition to its use through organized seminars, workshops, conferences and so on. This could reduce the impact of teachers negative attitude to change.

5.5 Limitations and suggestions for further studies

This study was geographically limited to senior secondary school two students in two local government areas of Ibadan city and Ibadan less city of Oyo state. There is the need for a

wider coverage in other local government in Oyo State as well as in other geo-apolitical zones in Nigeria, like the South South and the South East which share a similar educational policy with the South West where this study was carried out.

The study was also limited to only public senior secondary schools in Ibadan,there is the need to carry out this quassi experiment in private senior secondary schools in Oyo State

The study was also limited to only two active learning techniques: (active review session and panel discussions) out of ten learning techniques identified under the student working as a team category of active learning strategy. Other studies could be carried out using combinations of active review panel discussion with any other two of the remaining eight techniques under this category. Any three new techniques under this category can also be used.

The research was limited to only two moderator variables: students' school location and students' verbal ability. Further research could look at other areas like the school type and gender.

The current school time- table that gives a single period to Economics in the school curriculum poses a major limitation to this study. The consent of other subject teachers were sought because the time allotted for their subjects was encroached upon by the double period used for this study in the panel discussion category. Finding of this study is also expected to provide an avenue for references in future studies.

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APPENDIX 1

ACTIVE REVIEW TECHNIQUES

International Centre for Educational Evaluation (ICEE) University of Ibadan

Active Review Instructional Plan (ARIP) (Active Review Group)

Week 1 Module A

Class: SS2 Economics

SECTION 1: INTRODUCTION

Topic: Production (Production Possibility Curve)

Duration: 2 hours for the week of 3 periods at 40 minutes per period.

Instructional Materials: Charts and textbooks,

Fundamental of Economics for SSS, African press Ltd, Ibadan

Previous Knowledge: Students had previously acquired knowledge of production as the creation of goods and services and the ultimate distribution of the goods to final consumers for the satisfaction of their wants. They also know types of production and factors of production at SSS 1.

Objectives: At the end of the lesson, students should be able to:

i. Draw Production Possibility Curve (PPC)

ii. State the relationship between Production Possibility Curve and opportunity cost.

SECTION: 2 PRESENTATIONS

Teacher starts by introducing the new teaching technique of active review by altering the conventional sitting arrangement, as he makes a spontaneous division of the class to groups of five students to form six different groups, e.g in a class of 30 students**.**

Lesson One: 40 Minutes

Please note that the main activity of each student within each group is just to listen and write as the teacher lectures during this lesson.

Presentation:

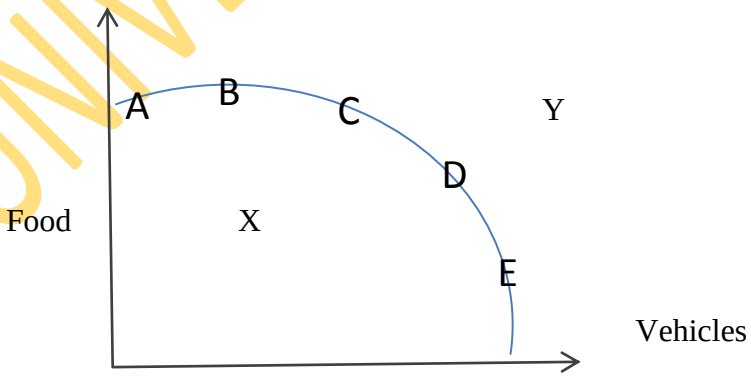
Step1. Teacher divides students into groups of five each to foster interactions and allow for brainstorming on Teachers review questions.

Step II. The teacher presents production possibility curve to the Students as a curve that shows what can be produced with the existing land labour and capital at our disposal and with existing technology.

Step III. The teacher makes illustrations of PPC.

Possibilities	Motor Vehicle	Bags of Rice
A	0	20
B	1	19
C	2	17
D	3	13
E	4	8
F	5	0

The teacher draws the curve



The teacher explains the curve

i. Any point on the curve, such as ABCD and E, are attainable possible combinations

ii. Any point inside the curve, such as x, means that resources are underutilised.

iii. Any production level outside the curve, such as Y, cannot be attained because existing resources are insufficient to produce at that level.

STEP IV.ACTIVE REVIEW SESSION ON LESSON ONE

At the end of teaching via the lecture method, the teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: "Explain the meaning of X and Y on the PPC."

STEP V Each group representative stands up to air the group submission

STEP VI. Teacher points out differences among each group's solutions proffered, and then makes summary and rounds off the lessons.

Lesson two: 40 Minutes

Please note that the main activity of each student within each group is just to actively listen and make jottings and not to bend down for a lengthy as the teacher lectures during this lesson.

i. The Teacher explains the relationship between PPC and Opportunity Cost. PPC slopes downwards from left to right which is direct consequence of the existence of Opportunity Cost.

ii. The basic problems of Economics, mainly scarcity. And the need to make choices, are best illustrated with a PPC.

iii. The society has to choose what to produce and had to start producing them.

ACTIVE REVIEW SESSIONS ON LESSON TWO

At the end of teaching via the lecture method, the teacher allows students from any of two groups to ask a review questions each which the teacher writes on the board, for example "What steps can be taken to address underutilisation of resources"?

iv Each group representative stands up to air the group submission

v Teacher points out differences among each group solutions proffered, then makes summary and rounds off the lessons.

Lesson Three: 40 Minutes: Active Review Activities

i. During this last period for the week, students are seated according to their groups of five for active review.

ii. The teacher writes review questions on the board, .e.g. a combination of the mini review made at the end of the first two periods. e.g. Explain the meaning of X and Y on the PPC and what steps can be taken to address underutilisation of resources? The teacher asks each group to provide answers to the question.

iii. Students are made to work together for solutions. Each group shows its solutions to the whole group.

iv. Differences among the solutions are pointed out by the students.

v. The teacher rounds off the lesson.

NB. Please note that during active review session at the end of the first and second lesson, it is the teacher that identifies the differences among the solutions given by the students while the students identify these differences during the main active review session slated for lesson three.

Active Review Instructional Plan (ARIP) (Active Review Group)

Week 2: Module A

Class: SSS2 Economics

Topic: Concepts of total average and marginal Productivity

Duration: 2 hours for the week at 40 minutes per period.

Instructional Materials: Charts and textbooks

Fundamental of Economics for SSS, African Ltd, Ibadan.

Previous Knowledge: Students had already received tuition on other concepts like labour force, efficacy of labour, etc.

Objectives: At the end of the lesson, students should be able to define:

i. Total average and marginal Productivity

ii. Calculate the Total, Average and Marginal Productivity

iii State the law of diminishing returns

iv Present the function in diagram form

Presentation: Lesson one (40 Minutes)

Step 1. Students adjust sitting arrangement to reflect existing active review groupings.

Step II. Teacher presents concepts of total average and marginal Productivity.

Step III. Definition:

i. Total output is the quantity of output obtained from the use of a given unit of labour.

ii. Average output: is the output pen unit of labour

$$A.P = \frac{T.P}{\text{Unit of Labour}}$$

Marginal productivity is the charge in total product when variables factor (labour) is increased by one unit.

One unit

$$MP = \frac{TP}{\text{In unit of labour}}$$

ACTIVE REVIEW SESSIONS ONE LESSON ONE

Step iv: At the end of teaching via the lecture method, the Teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example Explain the concept of total average and marginal productivity

v Each group representative stands up to air the group submission

vi Teacher points out differences among each group solutions proffered, then makes summary and rounds off the lessons.

Lesson Two: 40minutes

Step 1

Teacher explains that the Law of Diminishing Returns states that, under a given technology, an increase on the variable factor, with other factors fixed, will increase total output but after a certain point the extra output resulting from unit increase in their variable input will decrease

Step 2 Teacher makes: Illustration with table

no of employed	TP	AP	MP
1	5	5	-
2	20	10	15
3	45	15	25
4	60	15	15
5	60	12	0
6	54	9	-6
7	42	6	-12

Teacher makes explanation from the above example (Table)

i. Increase in returns occurred when the second and third labour were employed. At these stages TP, AP and MP were on increase

ii. Constant returns occurred at the 4^{th} and 5^{th} stages. At these stages, the TP remained at 60, zero MP and AP decreased as labour increased.

iii. Diminishing returns occurred at 5^{th} 6^{th} and 7^{th} labour employed. At these stages TP, AP and MP decreased as labour increased.

ACTIVE REVIEW SESSION ON LESSON 2

iv At the end of teaching via the lecture method, the teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: "Explain the law of diminishing returns."

v Each group representative stand up to air the group submission

vi The teacher points out differences among each group solutions proffered, then makes summary and rounds off the lessons.

Lesson Three **40 minutes: Active Review Activities**

i. During this last period for the week, students are seated according to their groups for active review.

ii. The teacher writes review questions on the board E.g., Explain the concept of total average and marginal productivity and the law of dimishing rerturns. Teacher asks each group to provide answer to the question.

iii. Students are made to work together for solutions. Each group shows its solutions to the whole group.

iv. Differences among the solutions are pointed out by the students.

v. Teacher rounds off the lesson.

Active Review Instructional Plan (ARIP) (Active Review Group)

Week 3: Module A

Class: SSS2 Economics

Topic: Migration of Population

Previous Knowledge: The topic is the continuation of production.

References: Fundamentals of Economics

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Objectives: At the end of the lesson students should be able to:

i. Define Migration

ii. State the direction of Migration in West Africa

iii. Mention reasons for Migration

iv. State the effects of Migration

v. State, how to control migration

Presentation: Lesson one (40 minutes)

Step I: Students adjust sitting arrangement to reflect existing active review groupings.

Step II: Teacher defines migrations and directions of migration;

Migration is the movement people from one place to another to settle there for some time.

Directions of Migration

1. Rural – Urban Migration: This is migration of people from the rural areas to urban centre areas.

2 Rural – Rural Migration: Movement of labour to the areas where major cash crops are produced.

3 External migration.

Teacher explains reasons for migration which includes:

a. Employment opportunities

b. Education

c. Social Amenities

d. Religious and Political crises

e. Availability of urban relatives

f. Weather and Climate

g. Adventure

h. Commerce

ACTIVE REVIEW SESSION ON LESSON ONE

At the end of teaching via the lecture method the Teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: "Define migration, and explain the various directions of migration". Each group representative stands up to air the group's submission.

The teacher points out differences among each group solutions proffered, and then make summary and rounds off the lessons.

Lesson two (40 minutes)

Step I: Students adjust sitting arrangement to reflect existing active review groupings.

Step 2: Teacher explains the Economic effects of Rural-Urban Migration thus:

1. It increases the level of urban unemployment.
2. Agriculture (food production) is reduced.
3. Population explosion in cities increases the demand for social services.
4. It leads to social problems.
5. Uneven distribution of population.
6. It increases the size of labour force.

Step 2: The teacher explains how to control migration which includes the following:

i. The establishment of industries and projects to absorb the rural working population.

ii. Establishment of educational institutions in rural areas.

iii. Provision of social amenities in rural areas.

iv. Improvement and modernisation of the traditional system of agriculture.

v. Legislation that passing of laws by the government restricting the movement of people to urban centres.

ACTIVE REVIEW SESSION ON LESSON TWO

At the end of teaching via the lecture method the Teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: "State economics effect of urban and rural migration and how it can be controlled."

Each group representative stands up to air the group's submission

The teacher points out differences among each group's solutions proffered, and then makes summary and rounds off the lessons

Lesson Three: **40 minutes: Active Review Activities**

i. During this last period for the week, students are seated according to their groups for active review.

ii. The teacher writes review questions on the board. For example: Define migration. Explain the various directions of migration as well as how it can be controlled and state economics effect of urban and rural migration

iii. Students are made to work together for solutions. Each group shows its solutions to the whole group.

iv. Differences among the solutions are pointed out by the students.

v. The teacher rounds off the lesson.

Active Review Instructional Plan (ARIP) (Active Review Group)

Week 4 Module A

Class: SS2 Economics

Topic: The demand for and supply of labour

Previous Knowledge: Students had already received tuition on the general concept of demand and supply.

References: *Fundamentals of Economics for SSS*. African Ltd, Ibadan

Duration: 2 hours for the week of 3 periods@ 40 minutes per period

Objectives: At the end of the lesson students should be able to:

i. Define the demand for labour

ii. State the factors affecting the demand for labour

iii. Define the supply of labour

iv. Mention the factors affecting supply of labour

v. Define wages

vi. State the reasons for difference in wages

Presentation: Lesson one: (40 minutes)

Step I: Students adjust the sitting arrangement to reflect existing active review groupings

Step 2:

The teacher explains the demand for labour and the factors that affect demand for labour

1. Demand for labour relates to the quantity of human effort required by entrepreneurs for carrying out production
2. Factors affecting the demand for labour:
   i. The demand for labour output and the price level within the economy
   ii. The state of employment in the economy
   iii. The quantity of other factors of production available
   iv. The price of labour
   v. The nature of industries
   vi. The number of industries

Step 3

The teacher explains that the supply of labour means the quantity of labour that would be offered for service at alternative wage rates.

The teacher also explains the following factors that affect supply of labour

1. Wage rate
2. Government regulations concerning entry age requirements
3. Total population
4. The legal age of retirement
5. Role of women in the society
6. Number of working hours
7. School leaving age
8. Length of training
9. The number of disabled

ACTIVE REVIEW SESSION ON LESSON ONE

At the end of teaching via the lecture method the Teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board,

for example: “Define demand and supply of labour?, State the factors that affects the demand and the supply of labour?”

Each group representative stands up to air the group submission

The teacher points out differences among each group solutions proffered, and then makes summary and rounds off the lessons

Lesson Two: (40 minutes)

Step1: The teacher explains the underlisted as reasons for differences’ in wages

Reasons for differences in Wages

1. Difference in productivity among workers
2. Demand and supply conditions for skills
3. Working conditions
4. Prestige associated with job
5. Immobility of labour and cost of movement
6. Man-made barriers such as Trade Union policies
7. Ignorance of job opportunities
8. Gender discrimination
9. Natural talents
10. Government policy
11. Cost and length of training.

ACTIVE REVIEW SESSION ON LESSON TWO

At the end of teaching via the lecture method the Teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: “State reasons for differences in wages?”

Each group representative stands up to air the group’s submission

The teacher points out differences among each group solutions proffered, and then makes summary and rounds off the lessons

Lesson three **40 minutes...Active Review Activities**

During this last period for the week, students are seated according to their groups for active review

i. The teacher writes review questions on the board. For example: Explain the term demand and supply for labour. Explain the factors affecting demand and supply of labour and factors affecting differences in wages.

ii. Students are made to work together for solutions. Each group shows its solutions to the whole group.

iii. Differences among solutions are pointed out by the students

The teacher rounds off the lesson

(Active Review Instructional Plan (Active Review Group)

Week 5 Module A

Class: SSS2 Economics

Topic: Concepts of Employment, under employment and Unemployment. Types of unemployment and causes of unemployment

Sub Topic; Effects and control of unemployment

Previous Knowledge: Students had received tutorials on other concepts population an, migration etc.

References: *Fundamentals of Economics for SSS,* African Press Ltd, Ibad

Duration: 2 hours for the week of 3 periods at40 minutes per period

Objectives: At the end of the lesson students should be able to:

i. Define the term employment, unemployment and underemployment.

ii. State the factors that influence the level of employment in Nigeria

iii. State the types of unemployment

iv. State the effects of unemployment

v. Mention how to control unemployment

Presentation: Lesson one: (40 minutes).

Step 1 Students adjust the sitting arrangement to reflect existing active review groupings

Step 2. Teacher explains the term,

1. Employment: There is employment the factors of production if they are engaged in production.

Teacher explains the following as

Factors influencing the level of employment of labour in agriculture, tourisms and construction.

1. Public and private instrument expenditure
2. Lending policies of financial and other institutions
3. Foreign earning capacity
4. Trade union activities
5. Entrepreneurial factors

STEP 3

Teacher explains underemployment: There is underemployment of the factors of production if they are not being fully utilized when labour is working below capacity

Teacher explains Unemployment: It is a situation in which people who are capable, willing and legally qualified to work cannot find suitable jobs.

STEP 4: Teacher states the following as types of unemployment:

i. Structural unemployment
ii. Cyclical unemployment
iii. Seasonal unemployment
iv. Frictional unemployment
v. Disguised unemployment
vi. Residual unemployment

ACTIVE REVIEW SESSION ON LESSON ONE

At the end of teaching via the lecture method the Teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: "State meaning of Employment, Unemployment and Underemployment?"

Mention types of unemployment and Factors influencing the level of employment of labour in agriculture, tourisms and construction

Each group representative stands up to air the group submission

The teacher points out differences among each group solutions proffered, and then makes summary and rounds off the lessons

LESSON TWO: (40 minutes)

Step 1: The teacher explains effects of unemployment to include the following:

i. Loss of potential output
ii. Reduction in investment
iii. Waste of manpower
iv. Increase in the number dependents
v. It causes migration
vi. Waste of resources
vii. High level of poverty
viii. Economic sabotage

Step 2: Teacher explains that unemployment can be control led via the following measures

i. The use of monetary policies
ii. Government could encourage retraining of workers
iii. Government should make it compulsory that vacancies in important government concerns or private organisations be advertised in mass media
iv. By creating employment generating schemes and agencies NSE.
v. Increasing government expenditure on provision of infrastructure facilities
vi. Restriction of the economy
vii. Encouraging labour intensive projects rather than capital intensive projects.
viii.

ACTIVE REVIEW SESSION ON LESSON TWO

At the end of teaching via the lecture method the teacher allows at least students from any of two groups to ask a review questions each which the teacher writes on the board, for example: State effects of unemployment and how it can be controlled?

Mention types of unemployment and Factors influencing the level of employment of labour in agriculture, tourisms and construction.

Each group representative stand up to air the group submission

The teacher points out differences among each group solutions proffered, and then make summary and rounds off the lessons.

Lesson Three: 40 minutes: (Active Review activities)

During the last period for this week, students are made to sit according to their group for active reviews.

1. The teacher writes review questions on the board. For example: states the meaning of employment, unemployment and under employment?. What are the factors that Influences the level of employment? Mentions types of unemployment?.
2. Students are made to work together for solutions. Each group shows its solutions to the whole group
3. Difference among solutions is pointed out by the teacher.
4. The teacher rounds off the lessons.

Fig.AP.1.1. ACTIVE REVIEW SESSION IN A RURAL SCHOOL

Fig.AP.1.2.ACTIVE REVIEW SESSION IN AN URBAN SCHOO

APPENDIX 2

PANEL DISCUSSION TECHNIQUE

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION (ICEE)

UNIVERSITY OF IBADAN

Panel discussion instructional plan (PDIP) (Panel discussion group)

MODULE B

Week 1

Section A

Class SSS2 Economics

Topic: Production (Production possibility curve) (PPC)

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Instructional Materials: Charts textbooks: *Fundamentals of Economics for SSS,* African Ltd, Ibadan

Previous Knowledge: The topic is a continuation of "production" and students had been taught on the meaning of production as the creation of goods and services and the ultimate distribution of the goods to final consumers for the satisfaction of their wants. They also knew types of production and factors of production.

Objectives: At the end of the lessons students should be able to

1. Draw PPC
2. State the relationship between Production Possibility Curve and opportunity cost

Section B: PRESENTATION

1.The teacher start by introducing the new teaching technique of panel discussion by altering the conventional sitting arrangement as he makes a spontaneous division of the class to groups of five students to form six different groups e.g. in a class of 30 students. The purpose of this grouping is to allow members of each group to know each other and to ignite intellectual interactive spirit among one another.

2. Students main activity in the first lessons is to listen to teacher's explanation on the topics to be treated as well as sub topics to be allotted to each group for research and presentation.

Lesson one: (40 minutes)

Step 1

The teacher reviews previous lessons by asking questions on production, its meaning as the creation of goods and services and the ultimate distribution of the goods to final consumers for the satisfaction of their wants. He also asks questions on types of productions and factors of production. This is done with the general class.

Step 2

The teacher introduced the topic of the day i.e. production possibility curve (PPC) and give assignment to each group to research into (1)what is production possibility curve

(2) how to draw PPC and (3) State the relationship between PPC and opportunity cost. Since the week lesson is divided into three tasks, if the groups are more than three, two groups can be made to research into one of the sub topics.

Step 3

The teacher explains various resource materials and centres to be consulted by students, before next contact. The next contact will be for presentations and more interaction among students' in group within the time allotted for the period. The recommended period of research by student before presentation is three days.

Lesson two and three: 80 minutes: (double period)

Step 1 Students adjust sitting arrangement to reflect existing groupings for panel discussions. A table with 5 chairs will be set before the class for each panel presentation.

Step 2. Students are given 5 minutes to interact within each group to package their presentation

Step 3.The teacher invites each group in turn to a set table in front of the class. These are the set of groups previously assigned to draw and explain PPC.6 minutes will be allotted for each presentations and 4 minutes to response to audience questions.

Step 4

The teacher asks the group leader to give a report to or make presentation on how to draw and explain production possibility curve. The presentation is likely to be as follows: The first panel presentation:

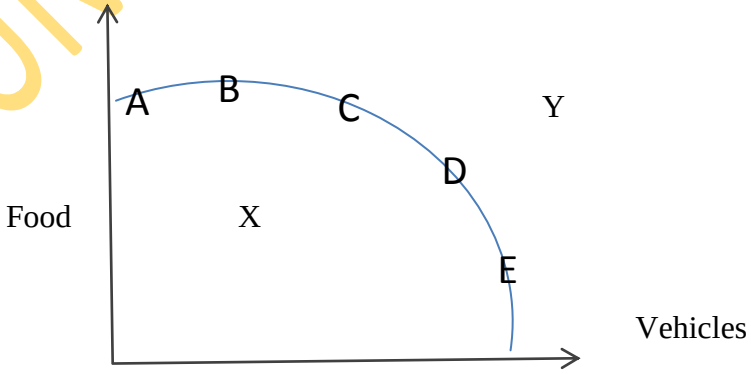
'PPC is a curve that shows what can be produced with the cost, land, labour and capital at our disposal and with existing technology". The second panel presentation is expected to explains the same thing from another point of view, while the third draws the PPC curve, the fourth explains the curve and the fifth panelist is expected to states the relationship between ppc and opportunity cost.

PPC is a curve that shows what can be produced with the existing land labour and capital at our disposal and with existing technology.

Illustrations of PPC.

Possibilities	Motor Vehicle	Bags of Rice
A	0	20
B	1	19
C	2	17
D	3	13
E	4	8
F	5	0

The Panel leader draws the curve



The panel leader explains the curve

i. Any point on the curve such as ABCD and E is an attainable possible combination.

ii. Any point inside the curve such as X means that resources are underutilised.

iii. Any production level outside the curve such as Y cannot be attained because existing resources are insufficient to produce at that level.

iv. The panelist explains relationship between PPC and opportunity Cost. PPC slopes downwards from left to right which is a direct consequence of the existence of opportunity cost.

v. The basic problems of economics, mainly scarcity and the need to make choices, are best illustrated with a PPC.

vi. The society has to choose what to produce and how the set about producing them.

Step 5

The teacher requests other students in the floor to ask questions from the panelist and various answers will be generated with the guide of the teacher

Step 6

The teacher invites groups assigned to study relationship between PPC and opportunity cost.

Step 7

The teacher asks the group leader to give short report or presentation of relationship between PPC opportunity costs. The reports is expected to explain

a. That PPC sloped down wards from left to right which is a direct consequence of the existence of opportunity cost

b. The basic problems of economics, mainly scarcity and need to make choices, are best illustrated with a PPC.

c. The society has to choose what to produce and how to set about producing them.

Step 8

After the presentation from all the groups with their different opinions, other students in the floor direct questions to the panelist.

Step 9

The teacher summarizes all the presentations and structured opinions to reflect the true content of what the student is expected to acquire for the double peri

Panel discussion Instructional Plan (PDIP) (Guided Panel Group)

MODULE B

Week 2

Class: SS 2 Economics

Topic: Concepts of total average and marginal productivity

Duration: 2 hours for the week of three periods at 40 minutes per period

Instructional Materials: Charts and textbooks: *Fundamentals of Economics for SSS,* African Ltd, Ibadan.

Previous Knowledge: Students had already received lessons in other concepts like that of labour etc.

Objectives: at the end of the lessons students should be able to define:

i. Total average and marginal Productivity
ii. Calculate the Total, Average and Marginal Productivity
iii. State the law of diminishing returns
iv. Present the function in diagram form

Lesson one: (40 minutes)

Step 1. Step 1 Students adjust sitting arrangement to reflect existing groupings for panel discussions but without arranging chairs in front since this lesson is not for presentation.

Step 2

The teacher reviews previous lessons by asking questions on PPC, its meaning, graphical illustration and explanation of the graphical/illustration or PPC curve. He uses the questions on relationship between PPC and Opportunity Cost

Step 3

The teacher introduces the topic of the day i.e concept of total average and marginal productivity. He states its objective thus: At the end of the lesson students should be able to

i. Define total average and marginal productivity
ii. Calculate the Total, Average and Marginal Productivity

Step 4 The teacher assigned fresh topics to different groups with a guide on how to secure materials, i*n doing this, the Teacher makes detailed explanations on what should be the content as well as the objective of the new topic.* Which is "concept of total average and marginal productivity"?.The teacher also allows for more interaction among students' in group within the time allotted for the period

Lessons two and three: 80 minutes (double periods)

Step 1 Students adjust sitting arrangement to reflect existing groupings for panel discussions. A table with 5 chairs is also set before the class for each panel presentation.

Step 2.Students are given 5 minutes to interact within each group to package their presentation

Step 3

The teacher invites each group in turn to a set table in front of the class i.e groups assigned with concept of and total average marginal productivity, and law of diminishing returns with illustrations.

Step 4

The teacher asks the group leader to give a report or make a presentation on definition of total output, average output and marginal productivity. The group also explains and illustrates the law of diminishing returns. Their presentation is expected to be similar to this:

Definition

i. Total output is the quantity of output obtained from the use of a given unit of labour
ii. Average output: is the output per unit of labour

$$A.P = \frac{T.P}{\text{Unit of Labour}}$$

iii. Marginal productivity is the change in total product when the variable factor (labour) is increased by one unit.

$$MP = \frac{TP}{\text{In unit of labour}}$$

Law of Diminishing: Returns states that under a given technology an increase on the variable factor, with other factors fixed, will increase total output but after a certain point the extra output resulting from unit increase in their variable input begins to decrease.

Step 5

Other students on the floor ask questions from the panelist eliciting answers from them with the guide of the teacher.

Step 6

The teacher summarizes all presentations and activities of the first segment.

Step 7

The teacher then introduces the next sub topic of the day with its objectives i.e illustration of law of diminishing returns with tables and explanation of the table. The objective here is that students should be able to present the functions of law of diminishing returns in diagram form as well as state the importance of the law.

Step 8

The teacher invites the groups in turn to a set table in front of the class i.e group assigned to study the topic above.

Step 9

The teacher asks group leader to give a short report or make a presentations on illustration of law of diminishing, its explanation and importance of the law. Their presentation is expected to include this:

Law of Diminishing Returns: states that under a given technology an increase on the variable factor, with other factors fixed, will increases total output but after a certain point the extra output resulting from unit increase in their variable input begin to decrease.

Illustration with table no of employed	TP	AP	MP
1	5	5	-
2	20	10	15
3	45	15	25
4	60	15	15
5	60	12	0
6	54	9	-6
7	42	6	-12

Explanation from the above example (Table)

i. Increase in returns occurred when the second and third labour were employed. At these stages TP, AP and MP were on the increase

ii. Constant returns occurred at the 4^{th} and 5^{th} stages. At these stages the TP remained at 60, zero MP and AP decreased as labour increased.

iii. Diminishing returns occurred at the point where 5^{th} 6^{th} and 7^{th} were labour employed. At these stages TP, AP and MP decreased as labour increased.

Step 10

Other students on the floor ask questions eliciting various answers from the panelist with the guide of the Teacher

Step 11

The teacher summarizes all the presentations.

Panel Discussion Instructional Plan (PDIP)

(Guided Panel Group)

Week 3 Module B

Class: SS2 Economics

Topic: Migration of Population

Previous Knowledge: Students had already received tuition on population and migration is a continuation of the topic "population".

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Instructional materials: Charts & Textbooks

Fundamentals of Economics for SSS, African ltd, Ibadan.

Objectives: At the end of the lesson students should be able to:

a Define Migration

b State the direction of Migration in West Africa

c Mention reasons for Migration

d State the effects of Migration

e State how to control migration

Presentation **Lessons one: (40 minutes)**

Step 1. Students' adjust sitting arrangement to reflect existing groupings for panel discussions but without arranging chairs in front since this lesson is not for presentation.

Step 2

The teacher reviews previous lessons by asking questions on concepts of total average and marginal productivity

Step 3

The teacher introduces the topic of the day, i.e Migration of Population, states its objective thus: At the end of the lesson students should be able to:

a Define Migration

b State the direction of Migration in West Africa

c Mention reasons for Migration

d State the effects of Migration

e State how to control migration

Step 4 The teacher assigned fresh topics to different groups with a guide on how to secure materials; i*n doing this, the teacher makes detailed explanations on what should be the*

content as well as the objective of the new topic. Which is Migration of Population,. The teacher also allows for more interaction among students' in group within the time allotted for the period

Lessons two and three: 80 minutes: (double periods)

Step 1 Students adjust sitting arrangement to reflect existing groupings for panel discussions. A table with 5 chairs is also set before the class for each panel presentation.

Step 2 Students are given 5 minutes to interact within each group to package their presentation

Step 3: The teacher invites the groups in turn to a set table in front of the class i.e groups assigned with the task of defining migration, and stating different directions of migration as well as finding reasons for migrations.

Step 4 The teacher asks each group leader to give a report or presentation on definition of population migration, its directions and reasons for migration.

Their presentation is expected to include the following:

Definition: Migration is the movement of people from one place to another to settle in those places for a while.

Direction of Migrations

1. Rural – Urban Migration: This is migration of people from the rural areas to urban centre
2. Rural – rural Migration: Movement of labour to the areas where major cash crops are produced
3. External migration.

Reasons for Migration:

a. Employment opportunities
b. Education
c. Social Amenities
d. Religious and political crises
e. Availability of urban relatives

f. Weather and climate

g. Adventure

h. Commerce

Step 5

Other students on the floor ask questions from panelists eliciting answers from them panelist with the guide of the teacher.

Step 6

The teacher summarizes all the presentations and activities of the first segments.

Step 7

The teacher introduces the other segment of the continuous topic by stating these components as knowing the economic effects of rural - urban migration and how to control migration.

Step 8

The teacher invites another group assigned on the listed topic above

Step 9

The teacher ask group leader to give short report or presentation discussing the possible effects of rural –urban migration as well as how to effectively control migration.

Their presentation is expected to follow these patterns

Economic effects of rural-urban migration to include

1. It increases the level of urban unemployment
2. Agriculture (food production) is reduced
3. Population explosion in cities increases the demand for social services
4. It leads to social problems
5. Uneven distribution of population.
6. It increases the size of labour force

How to control Migration

a. The establishment of industries and projects to absorb the rural working population.

b. Establishment of educational institutions in rural areas

c. Provision of social amenities in rural area

d. Improvement and modernisation of the traditional system of agriculture

e. Legislation / passing of laws by the government restricting the movement of people to urban centres.

Step 10

Other students on the floor ask questions eliciting various answers from the panelists

Step 11

The teacher summarizes all the presentations and activities

Panel Discussion Instructional Plan (PDIP)

(Guided Panel Group)

Week 4 Module B

Class: SS2 Economics

Topic: The demand for and supply of labour

Previous Knowledge: Students had already received tuition on the general concept of demand and supply.

References: *Fundamentals of Economics for SSS*, African press ltd, Ibadan.

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Objectives: At the end of the lesson students should be able to:

vii. Define the demand for labour
viii. State the factors affecting the demand for labour
ix. Define the supply of labour
x. Mention the factors affecting supply of labour
xi. Define wages
xii. State the reasons for difference in wages

Presentation **Lessons one (40 minutes)**

Step 1. Students adjust sitting arrangement to reflect existing groupings for panel discussions but without arranging chairs in front since this lesson is not for presentation.

Step 2

The teacher reviews previous lessons by asking questions on Migration of Population

Step 3

The teacher introduces the topic of the day which is The demand for and supply of labour and states its objectives thus; At the end of the lesson students should be able to:

i. Define the demand for labour
ii. State the factors affecting the demand for labour
iii. Define the supply of labour
iv. Mention the factors affecting supply of labour
v. Define wages and state the reasons for difference in wages

Step 4 The teacher assigned fresh topics to different groups with a guide on how to secure materials, i*n doing this, the Teacher makes detailed explanations on what should be the content as well as the objective of the new topic which is The demand and supply of labour* its definitions, factors affecting the demand for labour, definition of supply of labour. Factors affecting labour supply, definition of wages and reasons for differences in wages.

The teacher also allows for more interaction among students' in group within the time allotted for the period.

Lessons two and three 80 Minutes (Double period)

Step 1 Students adjust sitting arrangement to reflect existing groupings for panel discussions. A table with 5 chairs is also set before the class for each panel presentation.

Step 2 Students are given 5 minutes to interact within each group to package their presentation

Step 3: The teacher invites the groups in turn to a set table in front of the class i.e groups assigned with the task of Definitions of, and factors affecting, the Demand for labour.

2 Factors affecting the demand for labour:

ix. The demand for labour output and the price level within the economy
x. The state of employment in the economy
xi. The quantity of other factors of production available
xii. The price of labour
xiii. The nature of industries
xiv. The number of industries

Supply of labour means the quantity of labour that would be offered for service at alternative wage rates.

Step 4

The teacher allows members of the floor to make contribution in form of question that will elicit answers from the panel lists with the guide of the teacher

Step 6

The teacher summaries all the presentations on this segment

Step 7

The teacher invites the second group assigned with presentations on factors affecting the supply of labour, definition of wages and reasons for wage differentials Their presentation will include;

Factors that affect supply of labour :

1. Wage rate
2. Government regulations concerning entry age requirements
3. Total population
4. The legal age of retirement
5. Role of women in the society
6. Number of working hours
7. School leaving age
8. Length of training
9. The number of disabled

The under listed are reasons for differences' in wages

Reasons for differences in Wages

1. Difference productivity among workers
2. Demand and supply conditions for skills
3. Working conditions
4. Prestige associated with job
5. Immobility of labour and cost of movement
6. Man-made barriers – Trade Union policies
7. Ignorance of job opportunities
8. Gender discrimination

9. Natural talents
10. Government policy
11. Cost and length of training.

Step 8

The teacher allows other floor members to ask questions from the panel member is eliciting responses and explanations

Step 9

The teacher summarizes all the presentations and rounds off the lesson.

Panel discussion instructional plan (P DIP) (Panel discussion group) i.e Guided panel Group

Week 5	Module B
Class:	SS2 Economics
Topic:	Concepts of employment, under-employment and Unemployment
Sub Topic:	**Effects and control of unemployment**
Previous Knowledge:	Students had received tutorials on other concepts population and, migration etc.
References:	*Fundamentals of Economics for SSS*, African ltd Ibadan.
Duration:	2 hours for the week of 3 periods at 40 minutes per period
Objectives:	At the end of the lesson students should be able to: a. Define the term employment, unemployment and underemployment. b. State the factors that influence the level of employment in Nigeria c. State the types of unemployment d. State the effects and control of unemployment

Presentation **Lessons one (40 minutes)**

Step 1. Students adjust sitting arrangement to reflect existing groupings for panel discussions but without arranging chairs in front since this lesson are not for presentation.

Step 2

The teacher reviews previous lessons by asking questions on the demand for and supply of labour and reasons for wage differentials.

Step 3

The teacher introduces the topic of the day which is concepts of employment, under employment and unemployment, causes and control of unemployment. And states its objective thus; at the end of the lesson students should be able to:

a. Define the term employment, unemployment and underemployment.

b. State the factors that influence the level of employment in Nigeria

c. State the types of unemployment

d. State the effects and control of unemployment

Step 4 The teacher assigned fresh topics to different groups with a guide on how to secure materials, i*n doing this, the Teacher makes detailed explanations on what should be the content as well as the objective of the new topic, which is* concepts of employment, under-employment and unemployment, causes and control of unemployment

The teacher also allows for more interaction among students' in group within the time allotted for the period

Lessons two and three: 80 minutes: (double periods)

Step 1 Students adjust sitting arrangement to reflect existing groupings for panel discussions. A table with 5 chairs is also set before the class for each panel presentation.

Step 2 Students are given 5 minutes to interact within each group to package their presentation

Step 3

The teacher invites to the high table the first set of groups previously assigned the task of presentation on definitions, factors influencing unemployment and types of unemployment.

Step 4

The teacher asks each group leader to make presentation or give their reports which is expected to include the following;

Employment: There is employment of the factors of production if they are engaged in production.

Factors influencing the level of employment of labour in agriculture, tourism and construction.

1. Public and private instrument expenditure
2. Lending policies of financial and other institutions
3. Foreign earning capacity
4. Trade union activities
5. Entrepreneurial factors

Underemployment: There is underemployment of the factors of production if they are not being fully utilized when labour is working below capacity

Unemployment:. It is a situation in which people who are capable, willing and legally qualified to work cannot find suitable jobs.

Types of unemployment:

1. Structural unemployment
2. Cyclical unemployment
3. Seasonal unemployment
4. Frictional unemployment
5. Disguised unemployment
6. Residual unemployment

Step 5

The teacher asks floor members to make their contribution by asking questions eliciting answers from panel members.

Step 6

The teacher summarises all the presentations in the first segments

Step7

The teacher invites to the high table the second set of groups assigned for presentation on effects and control of unemployment.

Step 8.

The teacher asks each group leader to make their presentations. This presentation will include these:

Effects of unemployment to include the following:

i. Loss of potential output
ii. Reduction in investment
iii. Waste of manpower
iv. Increase in the number dependent
v. It causes migration
vi. Waste of resources
vii. High level of poverty
viii. Economic sabotage

Unemployment can be control via the following measure

i. The use of monetary policies
ii. Government could encourage retraining of workers
iii. Government should make it compulsory that vacancies in important government concern or private organisation be advertised in mass media
iv. By creating employment generating schemes agencies NSE.
v. Increasing government expenditure on provision of infrastructure facilities
vi. Restriction of the economy
vii. Encouraging labour intensive project rather than capital intensive project. Encouraging labour intensive project rather than capital intensive project

Step 9

The teacher allows floor members to ask questions eliciting responses from panel members.

Step 10

The teacher summarises all the presentations and round off the lessons

Fig.AP.2.1.PANEL DISCUSSION SESSION IN A RURAL SCHOOL

Fig.AP.2.2.PANEL DISCUSSION SESSION IN AN URBAN SCHOOL.

APPENDIX 3

CONVENTIONAL (LECTURE) METHOD.

International Centre for Educational Evaluation (ICEE)

University of Ibadan

(Conventional Lecture Method Group)

Week 1 Module C

Class: SSS2 Economics

Topic: Production

Sub Topic: Production possibility curve

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Objectives: At the end of the lesson students should be able to:

i. Draw PPC

ii. State the relationship between production possibility curve and opportunity cost.

Previous Knowledge: The topic is the continuation of production.

References: *Fundamentals of Economics for SSS*, African ltd, Ibadan.

Presentation:

Lesson One: 40 minutes

Step 1

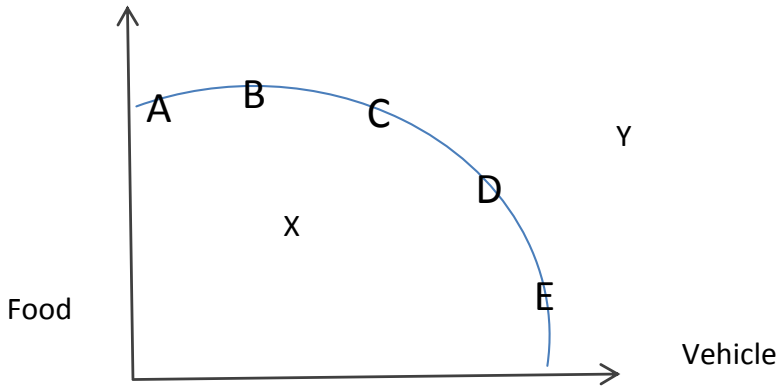
Definition: PPC shows what can be produced with the existing land, labour and capital at our disposal and with existing technology.

Step II: Illustration

Possibilities Motor Vehicles Bags of rice

A	0	20
B	1	19
C	2	17
D	3	13
E	4	8
F	5	0

Step 3: Curve



Class activities; Student will be given lesson summary on the chalk board

Lesson two: 40 minutes

Step 1

Explanation of the curve

1. Any point on the curve such as A, B.C, D&E is an attainable possible combination.
2. Any point inside the curve such as x means that resources are under utilities
3. Any production level outside the curve such as Y cannot be attained because existing resources are insufficient to produce at that level

   Class activities; Student will be given lesson summary on the chalk board

Lesson three: **40 minutes**:

Step 1

Relationship between PPC and opportunity cost: PPC slopes downwards from left to right which is a direct consequence of the existence of opportunity cost.

ii. The basic problems of economics, mainly scarcity and the need make choices, are best illustrated with a PPC.

iii. The society has to choose what to produce and how much of each to produce and how to set about producing them.

Class Activities: Students will be given a chalk board summary.

(Conventional Lecture Method Group)

Week 2 Module C

Class: SS2 Economics

Topic: Concepts of total, average and marginal productivity.

Previous Knowledge: The topic is the continuation of production.

References: *Fundamentals of Economics for SSS*, African ltd, Ibadan.

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Objectives: At the end of the lesson students should be able to:

i. Define total, average and marginal productivity

ii. Calculate the total, average and marginal productivity

iii. State the law of diminishing returns.

iv. Present the functions in a diagram form.

Presentation:

Lesson One: 40minutes

Definition

Total output is the quantity of output obtained from the use of a given unit of labour

Average output is the output per unit of labour

$$A.P = \frac{T.P}{\text{Unit of Labour}}$$

Marginal productivity is the change in total product when the variable factor (labour) is increased by one unit.

$$MP = \frac{TP}{\text{One unit In unit of labour}}$$

Class activities; Student will be given lesson summary on the chalk board

Lesson two: 40 minutes

Step 1

Law of Diminishing Returns states that under a given technology an increase on the variable factor, with other factors fixed, will increase total output but after a certain point the extra output resulting from unit increase in their variable input begins to decreasing..

Step 2:

Illustration with table no of employed	TP	AP	MP
1	5	5	-
2	20	10	15
3	45	15	25
4	60	15	15
5	60	12	0
6	54	9	-6
7	42	6	-12

Step 3: Explanation from the above example (Table)

Increase in returns occurred when the second and third labour were employed. At these stages TP, AP and MP were on the increase

iv. Constant returns occurred at the 4^{th} and 5^{th} stages. At these stages the TP remained at 60, zero MP and AP decreased as labour increased.

v. Diminishing returns occurred when the 6^{th} and 7^{th} labour were employed. At these stages TP, AP and MP decreased as labour increased.

; **Class activities: Students will be given lesson summary on the chalkboard**

Lesson three: 40 minutes

Step 1

The importance of the Law

i. It reminds every nation to control her population as land is fixed.

ii. It helps an entrepreneur to know how to co-ordinate factors of production and warns him on the adverse of increasing or decreasing one factor.

iii. It reminds every producer that to increase output indefinitely all factors must be increased

iv. It informs the producers when to stop adding variable factors in production and the wages as output decreases.

Class activities: chalkboard summary will be given.

(Conventional lecture Method Group)

Week 3 Module C

Class: SS2 Economics

Topic: Migration of Population

Previous Knowledge: The topic is the continuation of production.

References: *Fundamentals of Economics for SSS,* African ltd, Ibadan.

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Objectives: At the end of the lesson students should be able to:

vi. Define Migration

vii. State the direction of Migration in West Africa

viii. Mention reasons for Migration

ix. State the effects of Migration

x. State how to control migration

Presentation:

Lesson one: (40 minutes)

Step 1: Definition

Migration is the movement people from one place to another to settle there for some time.

Step II: Directions of Migration

1. Rural – Urban Migration: This is migration of people from the rural areas to Urban centre
2. Rural – rural Migration
    1. Movement of labour to the areas
    2. Uneven distribution of population
    3. It increases the six labour forces

Class activities; Student will be given lesson summary on the chalkboard

Lesson two: 40minutes

Step 1

Reasons for Migration;

a. Employment opportunities

b. Education

c. Social amenities

d. Religious and political crises

e. Availability of urban relatives

f. Weather and climate

g. Adventure

h. Commerce

Step 2

Economic effects of Rural-urban Migration to include

1. It increases the level of urban unemployment
2. Agriculture (food production) is reduced
3. Population explosion in cities increases the demand for social services
4. It leads to social problems
5. Uneven distribution of population.
6. It increases the size of labour force

Class activities; Student will be given lesson summary on the chalkboard

Lesson three: 40 minutes

Step 1: How to control Migration

vi. The establishment of industries and projects to absorb the rural working population.

vii. Establishment of educational institutions in rural areas

viii. Provision of social amenities in rural area

ix. Improvement and modernisation of the traditional system of agriculture

x. Legislation/ passing of laws by the government restricting the movement of people to urban centre

Class activities: Students will be given lesson summary on the chalkboard

(Conventional Lecture Method Group)

Week 4 Module C

Class: SS2 Economics

Topic: The demand for and supply of labour

Previous Knowledge: Students had already received tuition on the general concept of demand and supply.

References: *Fundamentals of Economics for SSS*, African ltd, Ibadan

Duration: 2 hours for the week of 3 periods at 40 minutes per period

Objectives: At the end of the lesson, students should be able to:

i Define the demand for labour

ii State the factors affecting the demand for labour

iii Define the supply of labour

iv Mention the factors affecting supply of labour

v Define wages

vi State the reasons for difference in wages

Presentation

Lesson one (40 minutes)

Step 1 The demand for labour

It relates to the quantity of human effort required by entrepreneurs for carrying out production

Step 2: Factors affecting demand for labour.

i. The demand for labour output and the price level within the economy

ii. The state of employment in the economy

iii. The quantity of other factors of production available

iv. The price of labour

v. The nature of industrious

vi. The number of industries lesson Two: Supply of labour means the quantity of labour that would be offered for service at alternative wage rate

Class activities: Students will be given lesson summary on the chalkboard

Lesson two: 40 minutes

Step 1. Factors affecting Supply of labour

1. Wage rate
2. Government regulations concerning entry age requirements
3. Total population
4. The legal age of retirement
5. Role of women in the society
6. Number of working hours
7. School leaving age
8. Length of training
9. The number of disabled

Class activities: Students will be given lesson summary on the chalkboard

Lesson three: 40 minutes

Step 1

Reasons for differences in wages

1. Difference productivity among workers
2. Demand and supply conditions for skills
3. Working conditions
4. Prestige associated with job
5. Immobility of labour and cost of movement
6. Man-made barriers such as trade union policies
7. Ignorance of job opportunities
8. Gender discrimination
9. Natural talents
10. Government policy
11. Cost and length of training.

Class activities: Students will be given lesson summary on the chalkboard

(Conventional Teaching Method Group)

Week 5	Module C
Class:	SS2 Economics
Topic:	Concepts of employment, under- employment and Unemployment
Sub Topic:	**Effects and control of unemployment**
Previous Knowledge:	Students had received tutorials on other concepts population and, migration etc.
References:	*Fundamentals of Economics for SSS*, African ltd, Ibadan
Duration:	2 hours for the week of 3 periods at 40 minutes per period
Objectives:	At the end of the lesson, students should be able to: i. Define the term employment underemployment and unemployment. ii. State the factors that influence the level of employment in Nigeria iii. State the types of unemployment vi. State the effects of unemployment v. Mention how to control unemployment

Presentation
Lesson one: 40 minutes
Step 1
Definition of term

Employment: There is employment of the factors of production if they are engaged in production.

Factors influencing the level of employment of labour in agriculture, tourism and construction.

1. Public and private instrument expenditure

2. Lending policies of financial and other institutions
3. Foreign earning capacity
4. Trade union activities
5. Entrepreneurial factors

(II) Underemployment: There is underemployment of the factors of production if they are not being fully utilized when labour is working below capacity

Class activities; Student will be given lesson summary on the chalk board

Lesson two (40minutes)

Unemployment: It is a situation in which people who are capable willing and legally qualified to work cannot find suitable jobs.

Types

1. Structural unemployment
2. Cyclical unemployment
3. Seasonal unemployment
4. Frictional unemployment
5. Disguised unemployment
6. Residual unemployment

Class activities: Students will be given lesson summary on the chalkboard

Lesson three: (40 minutes)

Step 1

Effects

1. Loss of potential output
2. Reduction in investment
3. Waste of manpower
4. Increase in the number dependents
5. It causes migration
6. Waste of resources
7. Economic sabotage

8 High level of poverty

Step 2

Control

1. The use of monetary policies
2. Government could encourage retraining of workers
3. Government should make it compulsory that vacancies in important Government concerns or private organisations be advertised in mass media
4. By creating employment generating schemes and agencies.
5. Increasing government expenditure on provision of infrastructure
6. Restruction of the economy
7. Encouraging labour intensive projects rather than capital intensive projects.

Class activities: Students will be given lesson summary on the chalkboard

Fig.AP.3.1.CONVENTIONAL (LECTURE) METHOD SESSION IN A RURAL SCH.

Fig. AP.3.2. CONVENTIONAL (LECTURE) METHOD SESSION IN AN URBAN SC

APPENDIX 4

UNIVERSITY OF IBADAN

INSTITUTE OF EDUCATION

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

ACHIEVEMENT TEST IN ECONOMICS

SSS II STUDENTS

SECTION A

Student's Name:

Class and Examination number:

SECTION B

INSTRUCTION: ANSWER ALL QUESTIONS Choose the correct option from A-E.

1. The movement of a worker from one grade to another within the same industry is a form of mobility of labour which is

   A. geographical B. verticalC. occupation D. horizontal

2. In a rapidly growing economy where human labour is being replaced by machines, there is likely to be

   A. cyclical unemployment B. fractional unemployment

   C. seasonal unemployment D. residual unemployment

3 Which of the following is the most important reason for difference in wages among occupations?

   A. Length and cost of training B. Supply of labour C. Attractiveness of the job D. Influence of trade union

4. When a country has a large labour force, it is beneficial to use a method of production which is

   A. Capital intensive B. land intensive C. labour intensive D. mechanically intensive

5. The productivity of labour does not depend only on its own effort and efficiency, but also on

   i. the level of technical knowledge . ii The quality of other factors

   iii racial qualities which allow persons from certain races to have good physique and be very active. Which of the above statements is/are correct?

A. I only B. I and II only C. I and III only

D. II and III only .

6 The difference between the number of immigrants and emigrants is

A. internal mobility B. internal migration C. net migration D. marginal migration

7. Diminishing returns occur in the short run when there is a reduction in the

A. average product of the fixed factor B. total product of the variable factor C. total product of the fixed factor D. Marginal product of the variable factor

8. In production, factory buildings are regarded as

A. variable costs B. average costs

C. marginal costs D. total costs

9. The efficiency of a country's labour force depends on all the following except

A. improved working conditions B. better health care facilities

C. adequate training D. Frequent strikes and lock-outs

10 The theory of diminishing marginal utility states that as more units of a commodity are consumed, the

A. satisfaction from an extra unit decreases.

B. satisfaction from an extra unit rises

C. satisfaction from an extra unit remains constant

D. total satisfaction from the good remains the same.

11. The employers' demand curve for labour is represented by the

A. marginal product curve of labour. B. total product curve of labour

C. average product curve of labour.

D. total cost curve of labour.

12. The largest unemployment sector in a typical West African country is

A. construction B. transportation C. petroleum

D. manufacturing

13. Total cost is the addition of

A. real cost and money cost B. price and taxes

C. fixed cost and variable cost D. average cost and marginal cost

14. The shape of the average cost (AC) curve shows that as production increases,

A. total cost decreases. B. average cost decreases and then increases.

C. average cost increases D. marginal cost steadily increases

15 Net migration is the difference between

A. population and census B. immigrants and emigrants

C. per capita income and population

D. Internal and external migration.

16. Wages are, to some extent, determined by the

A. marginal utility of labour B.marginal productivity of labour av

C. average productivity of labour

D. total productivity of labour.

17 Unemployment that arises because of introduction of new machines and equipment in production is called

A. cyclical B. structural

C. seasonal D. disguised

18 When the total product is at its maximum, marginal product is

A. increasing B. positive C. negative D. Zero

19. Marginal cost can be derived from the

A. total product B. total revenue C. total cost

D. average fixed cost.

20. To ensure high employment rates, developing countries should

A. build more universities. B. protect infant industries c. organize trade fairs. D. prevent rural-urban drift.

21. Which important economic Law States that under a given technology an increase on the variable factor, with other factors fixed, will increase total output. ? A. law of comparative cost. B. law of diminishing marginal utility. C. law of diminishing returns. D. Malthusian law of population.

22. A situation of full employment exists when A. every adult is employed B. all adult who can work are employed. C. all the person who have attained the age of

15 years and above are employed. D. all those who are eligible to work are employed.

23. The difference between the number of immigrants and emigrants is a. internal mobility. B. internal migration. C. net migration. D. Marginal migration

24. Diminishing returns occur in the short run when there is a reduction in the A. average products of the fixed factor. B. total products of the variable factor C. total products of the fixed factor D. marginal product of the variable factor E. marginal product of the fixed factor.

25. The unemployment associated with decrease in demand is referred to as A. disguised B. imposed C. voluntary D functional.

26. The supply of labour can be influenced by the A. size of the population. B. stage of economic development C. size of the country. D. extent of the market.

27. The majority of West African labour force is engaged in A. industrial production B. Agricultultural production C. mining industry D. construction industry.

28. Net migration is the difference between A. population and census
B. immigrants and emigrants. C. per capital income and population.
D. internal and external migration.

29. The optimum population of a country is reached when the A. Production of goods and services is less than the optimum. B. output per head is at its highest with a given volume of resources. C. total population increases with a given volume of resources. D. national resources increases as population increases

30. When the death rate for old people and the infant mortality rate is high, with no migration, there will be in the population a higher number of A. younger people in the population B. children in the population C. old people in the population. D. women in the population.

31. Economists speak about 'opportunity cost' when a consumer A. has the chance to minimize costs. B. has to forego one thing in order to have another. C. can equate his fixed costs with his variable costs. D. is able to save part of his income.

32. When all factors input are doubled, the production possibility curve will A. shift from left to right and returns to its original position. B. shift from left to right. C. remains in its former position. D. Shift fro right to left.

33. The concentration of industries in one area is referred to as A. localization of industries. B. multiplication of industries C. pluralization of industries. D. proliferation of industries.

34. The establishment of industries in rural areas will help to reduce .A. urban – rural migration. B. urban-urban migration. C .rural-urban migration. D. rural-rural migration.

35. International trade is necessary mainly because A. no country can live in economic isolation. B. different countries are endowed with the same nature and man made resources. C. some countries have comparative cost advantage in the production of certain commodities. D. the world demand for and supply of various categories of commodities are expanding fast.

36 Which of the following does not increase the population of a country ? A. an increase in birth rate B. a decrease in death rate C. immigration. D. immigration

37. Mobility of labour is not affected by (a) the optimum size of population (b) marriage and family(c) the regulation of trade unions (d) the periods of training

38. The concept of opportunity cost is important to the firm because it A determines the prices of the firms product. B. increases the level of output of the firm. C. leads to maximum satisfaction of the consumers D. guides firm in allocating resources.

39 Which of the following is not a reason why people migrate from one place to another? (a)to find job and to improve their standard of living (b) to live in a more suitable climate (c) for the sake of change and adventure (d) to escape from a religious, political or social situation in a country

40. In Economics, production is complete when (a) goods are produced in the factories (b) goods are sold to wholesalers (c) prices are fixed for goods and services (d) goods and services reach the consumers

41 A society that is on its production possibility curve. (a) has attained full employment but not full production (b) has attained full production but not full employment(c) is

using its resources inefficiently(d) has attained both full employment and full production

42. A nation with a working population which is sufficient to exploit its resources is said to be (a)over-populated (b) under-populated (c) experiencing decreasing population (d) experiencing increasing population

43. Production is not complete until the (a) goods get to the wholesalers (b) goods reach the final consumer (c) factors of production are combined (d) goods are ready for transportation

44. Which of the following is the correct way to calculate total cost (a) addition of fixed cost to variable cost (b)division to total cost by total output (c) multiplication of fixed cost by variable cost (d) subtraction of fixed cost from total cost

45 Division of labour may be restricted when (a) an ailing economy has improved (b) producers live in villages (c) market is small (d) there is full employment (e) there is inflation

46. Which of the following is regarded as fixed cost?
A. cost of raw materials B. cost of fuel C. cost of light D. rent on land

47. Capital as a factor of production is important because (a) it enables us to carry out tasks which cannot be done by human efforts only (b) most tasks an be done with bare hands (c) people can work without capital (d) without capital all other factors are useless (e) it provides money which is essential for the growth of business

48 Mr. Idowu needs a television and a refrigerator. Each costs N500.00, the exact amount he has. If Mr. Idowu buys the television, the refrigerator would be regarded as the (a) marginal cost (b) inferior item (c) opportunity cost
(d) supplementary item (e) prime cost

49. The difference between the number of immigrant and emigrants is (a) internal mobility (b) internal migration (c) net migration (d) marginal migration (e)external migration

50 Productivity per workers is best measured by (a) total output less number of workers (b) total output multiplied by number of workers (c) number of workers less total output (d)total output divided by number of work

MARKING GUIDE (Maximum Scores= 50)

ANSWERS TO QUESTIONS 1-50

1 B	11.C	21.C	31.B	41.D
2 A	12 .D	22.D	32.B	42.D
3 A	13. C	23.C	33.A	43.B
4 C	14 .B	24.D	34.C	44.A
5 B	15. B	25.D	35.C	45.C
6 C	16 .C	26.A	36.D	46.D
7 D	17.A	27.B	37.A	47.D
8 A	18.D	28.B	38.D	48.C
9 D	19.C	29.B	39. C	49.C
10 A	20 B	30.A	40.D	50.D

Appendix 5

UNIVERSITY OF IBADAN

INSTITUTE OF EDUCATION

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

STUDENTS ATTITUDE TOWARDS ECONOMICS SCALE (SATES)

(For SS 11Students Only)

SECTION A: PERSONAL DATA

Your Identity Number

……

School Name:……..

Age (in years):…….... Gender: Male (……) Female (…….)

SECTION B: STUDENT ATTITUDE TO ECONOMICS

Mark **"X"** in the column of the response that best fits your opinion on each of the statements below.

Key: Very true of me =VT, True of me = T, Rarely True of me = RT, Not True of me = NT

S/N	STATEMENT	VT	T	RT	NT
1.	I found some concepts in Economics syllabus difficult to understand.				
2.	I choose Economics on my parents advice				
3.	I found Economics subject to contain ideas that are useful to real life situation				
4.	I choose Economics to make up the number of subject required for the school certificate				
5.	I consider studying Economics as a waste of time.				
6.	Economics is a subject I like as a student				
7.	I do not usually attend Economics classes				
8.	I read topics in advance so that I can enjoy the lesson better.				
9.	I dislike writing too much note during Economics lessons				
10.	I found it too difficult to understand Economics text books				

11.	I found it easier to understand Economics than any subject in the social sciences commercial subjects.				
12.	I am always confident of passing whenever I write a test or examination in Economics subject				
13.	I easily forget all about Economics as a subject after school hours				
14.	There is too much reading in Economics as a subject.				
15.	No matter how hard I study, I do not do well in Economics tests				
16.	The absence of the Economics teacher from a lesson makes me sad as a student				
17.	Debates on Economics issues on television make me to develop interest in studying Economics as a school subject?				
18.	Economics is a course I would like to study at the University.				
19.	Economics contains too many facts and theories which I need to learn as a student.				
20.	Excursion to industries makes Economics lessons more practical to me				
21.	I choose Economics because it offers greater job opportunities				
22.	My access to many textbooks on Economics makes the subject easy for me.				
23.	I found it difficult to understand Economics as a school subject.				
24.	I do not find the teacher's method of teaching Economics interesting				
25.	I love to interact with other students to discuss various Economics concept				
26	I have great confidence to pass Economics as a subject				
27.	I love to apply my understanding of Economics concepts and theories to every day life				
28.	I love to cooperate with other students when given specific tasks to answer various questions on Economics subjects				
29.	I find it difficult to express myself when discussing Economics topics among fellow students				
30.	I love Economics subject both at home and in school				

APPENDIX 6

UNIVERSITY OF IBADAN

INSTITUTE OF EDUCATION

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION (ICEE)

VERBAL ABILITY TEST

SS 2 STUDENTS ONLY

TIME: 30 MINUTES

SECTION A

NAME:..... MALE/Female.....

Age Now:..... Test:.....

School:..... Date of Birth.....

Teacher:..... City:.....

EXAMPLE/PRACTICE QUESTIONS

1. Paper and wall

   Carpet and

……

   (a) Rug (b) Lion (c) Floor (d) Parquets (e) Room

Ans =a

2. AB and CD

   FG and ……..

   (a) HI (b) AC (c) BD (d) IJ (e) JK

Ans= a

In each of the following, pick out the word that does not belong to the group.

3. (a) Rat (b) Lizard (c) Dog (d) Elephant (e) cat

Ans=d

4. (a) Enormous (b) mighty (c) great (d) tiny (e) huge

Ans= d

In each of the following items, choose the one word that CANNOT be formed with the letters of the word printed in capitals.

5 TEACHER

(a) Chair (b) Cheer (c) Each (d) Reach (e) Heat

Ans =a

6 CONSTITUTION

(a) nuts (b) notion (c) tons (d) stint (e) station

Ans=e

7. I came across this book in the library: This means that

……

Ans= b

(a) Took this book to the library

(b) Found this book in the library

(c) Borrowed this book form the library

(d) Left this book in the library

(e) Forgot this book in the library

In each of the following problems, there are three sentences. Read them carefully and decide which one should come first, which second and which third.

8. 1.1 bought a book

2.1 went to the bookshop

3. My father gave me some money at home……..Ans= c

(a) 1, 2, 3, (b) 1, 3, 2, (c) 2, 3, 1, (d) 2, 1, 3, (e) 3, 2, 1

SECTION B

INSTRUCTION

You have 30 minutes to write this test. Some questions are easier than others. Try each question as you come to it, but if you find any question too difficult, leave it and come back to it later. Do not spend too much time on any question.

1. Father and son,

mother and ……

(a) daughter (b) child (c) girl (d) sister (e) niece

2. Food and man,

petrol and ……..

(a) can (b) garage (c) motor Car (d) stomach (e) driver

3. Eating and solid

Drinking and …….

(a) Tea (b) coffee (c) milk (d) cocoa (e) Liquid

4. Water and ship ……..

Air and ……

(a) Breathing (b) Flying (c) aero plane (d) airfield (e) tyre

5. He and man

She and ……..

(a) Girl (b) aunt (c) Mother (d) woman (e) queen

From 6-13, one word does not belong to each group. Pick out such word, and record your answer as usual

	A	B	C	D	E
6.	Locker	Carpet	Bench	Drawer	Cupboard
7.	Town	Street	Path	Road	Lane
8.	Regularly	Annually	Weekly	Fortnightly	Monthly
9.	Aim	Gain	Reason	Purpose	Motive
10.	Boy-scout	Air-force	Navy	Police-force	Army
11.	Right	True	Correct	Accurate	Left
12.	Aero plane	Canoe	Train	Car	Passenger

In each of the following problems, there are three sentences. Read them carefully and decide which one should come first, which second and which third.

13. 1. Tree was uprooted and fell across the motorway

2. The wind blew furiously

3. Government workers cleared the obstruction quickly

(a) 1, 3, 2 (b) 2, 1, 3 (c) 3, 2, 1 (d) 3, 1, 2 (e) 2, 3, 1.

14. 1. He drove his father's car to school yesterday.

2. His father did not know

3. John is a school boy

(a) 1, 3, 2 (b) 2, 1, 3 (c) 3, 2, 1 (d) 3, 1, 2, (e) 2, 3, 1.

15. 1. That was very kind of you

2. I wish I could find someone to help lift this box into the car

3. Tom, can you help lift this box into the car?

(a) 1, 3, 2 (b) 2, 1, 3 (c) 3, 2, 1 (d) 3, 1, 2 (e) 2, 3, 1

16. 1. He got angry with the dog for this

2. The dog bit his sister

3. He beat the dog with a stick

(a) 3, 1, 2 (b) 1, 2, 3 (c) 3, 2, 1 (d) 2, 3, 1 (e)2,1,3

17. 1. Soon the cat was eating a rat in a corner of the room

2. Something moved gently behind the corner

3. Suddenly the cat pounced on the object

(a) 1, 2, 3 (b) 1, 3, 2 (c) 3, 2, 1 (d) 2, 3, 1 (e) 2,1,3

Below each of the following sentences are five interpretations lettered A to E. Choose the one that most correctly explains the meaning of the sentence.

18. The boy is too young to learn how to drive. This means that the boy……

(a) Is a learner driver

(b) May learn to drive in future

(c) Is too short to drive

(d) Learnt to drive when he was young

(e) cannot learn to drive now.

19. The teacher bought that car before he joined the staff of our school. This means that he bought the car…….

(a) After joining the staff of our school

(b) Then joined the staff of our school

(c) Because he wanted to teach in our school

(d) Because our school wanted him to

(e) Immediately he joined the staff of our school..

19. The teacher bought that car before he joined the staff of our school. This means that he bought the car

(a) after joining the staff of our school

(b) then joined the staff of our school

(c) because he wanted to teach in our school

(d) because our school wanted him to

(e) Immediately he joined the staff of our school

20. Most of the clever pupils in our school are from poor homes.

This means that……..

(a) All the clever pupils are from poor homes

(b) There are no clever pupils from a rich home

(c) Very many of the clever pupils are from poor homes

(d) Poor homes have no clever pupils

(e) Rich men do not have clever children

In each of the following items, choose the one that CANNOT be formed with the letters of the word printed in capitals

21. **REPORTER**

(a) Gentle (b) pot (c) porter (d) top (e) rote

22. **INTELLIGENCE**

(a) Cell (b) elegant (c) neglect (d) elect (e) tingle

23. **SOMERSALT**

(a) Some (b) salt (c) result (d) tale (e) tears

24. **ADMINISTRATION**

(a) train (b) maintain (c) ration (d) instant (e) restrain

In each of items 25-30, you are given five words. One of these words could be used to describe what is meant by each of the other words. For each item put a square around the letter of the word which describes the other words

25. (a) eight (b) sixteen (c) thirty (d) number (e) ninety

26. (a) bean (b) yam (c) food (d) stew (e) soup

27. (a) money (b) kobo (c) two naira (d) five naira (e) fifty naira

28. (a) Fanta (b) hot oval tine (c) tea (d) a drink (e) cold water

29. (a) cereal (b) rice (c) maize (d) oats (e) corn

30. (a) head tie (b) handkerchief (c) sheet (d)cloth (e) shirt

Complete each pair from question 31-35.

31. Nose and Smell

Tongue and …….

(a) white (b) pink (c) body (d) taste (e) mouth

32. Walk and walking

Drive and ……..

(a) Walked (b) walker (c) running (d) walks (e) driving

33. Lion and Den

Convict and ……..

(a) Cell (b) barracks (c) police (d) prison (e) lawyer

34. Much and most

Late and ……..

(a) Latter (b) later (c) last (d) early (e) punctual

35. EF and GH

MN and ……

(a) YZ (b) PQ (c) RS (d) OP (e) WX

MARKING GUIDE (MAXIMUM MARKS=35)

ANSWERS TO QUESTIONS 1-35

1. A	9. B	17.D	25.D	33.A
2. B	10.A	18.E	26.C	34.C
3 .E	11.E	19.B	27.A	35.D
4. C	12.E	20.C	28.D	
5. D	13.B	21.A	29.A	
6 .B	14.D	22.B	30.D	
7. C	15.E	23.C	31.D	
8. B	16.E	24.E	32.E	