



## **Comparative Effectiveness of Power Point and Chalkboard Presentations in Teaching Secondary School Economics in Owerri Educational Zone of Imo State**

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**Abstract:** *The study compares the effectiveness of power point and chalkboard presentations in learning secondary school economics. The researcher was faced with the problem of poor academic performance of students in economics even when we have enough economics teachers in the schools. The objectives of the study are to find out the extent to which students would respond positively to the power point presentation; the difference that exists between the use of power point presentation and chalk board approach on students' performance in learning economics. Two research questions were addressed and one hypothesis formulated to guide the study. A pilot study was carried out which helped to sharpen the researcher's focus for the actual research exercise. Two treatment groups were used. The teaching exercise lasted for seven weeks and researcher-made multiple-choice items on economics and a ten – item questionnaire on effective response were administered on two treatment groups on the eight weeks. Mean scores were used to answer the research questions while t-test statistics of significant difference between two sample means were used for the Hypothesis. However, the research established that: the use of power point is an effective instructional material for learning economics. Power point is a better alternative to the chalkboard lesson approach. Finally, the following recommendations were made: that Government should increase funding for the procurement of computer and its accessories and remove the teaching of computer in secondary schools from the hands of contracted commercial outfits and entrust the teaching to well-trained teachers.*

**Key words:** *Constructivism, Teaching, Instructional Technology, Instructional Design, Chalkboard, Power point*

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### **Introduction**

Methods of curriculum content presentations have continued to change as a result of technological discoveries and their applications in education. In Nigeria, Information and Communication Technologies are not yet adopted in practice. Osuagwu (2004) states that the use of Information and Communication Technologies require well trained teachers, sufficient technological support, curriculum and instructional materials that integrate technology into day to day teaching rather than just treat it as an add onto old lesson plans.

Experiences today from advanced countries and researchers on the use of computers and combinations of computers influence the teaching and learning. This is because we are in a new era, a new millennium, the era of Information Technology where the computer is playing an important role. Computer according to Owolabi (2001) is “a set of electronic equipment that accepts data as input processes them with the aid of predefined instructions called programme and produces useful output for management or any other people’s use”.

Computer is flexible and can be combined with other multimedia such as Power point software, Projectors and Screen. Power point is a presentation software programme that uses a graphical approach to presentation in the form of slide show that accompanies the oral delivery of the topic (Russel, 2016). Power point serves more as a means of mapping and directing the flow of classroom discussion on a topic than as a means of presenting the materials. Power point can be used in the following way:

- Research findings,
- Lecture notes,
- Introduction to course instruction
- Classroom game shows
- Book reports.

Economics as a senior secondary school subject has aims and objectives to be achieved. To achieve these aims and objectives, basic education is necessary for an individual to have the capacity to access and apply information. Presently in Nigeria, teaching and learning in Secondary Schools still retain the convectional chalkboard method. Teachers, in most cases, act as the fountain of knowledge except for prescribed textbook. The students are mainly passive listeners. With increase momentum of technological revolution sweeping across the world, there is need for teaching and learning in Nigeria to adapt to new approaches.

According to West African Examination Council (WAEC), attainment in a subject is indicated by grades e.g. grade A<sub>1</sub> being the highest and f<sub>9</sub> being the lowest. The interpretation of the various grades is shown in fig. 1.1 below. A close study from the Ministry of Education Imo State, analysis of West African Senior Secondary School Certificate Examination result (2009-2014) on economics showed that students’ academic performance at alpha and credit levels are too low as compared with their performance at pass level.

**Fig 1.1: WAEC/NECO Attainment Grades**

Grades	Interpretation
A1	Excellent
A2	Very Good
A3	Good
C4	Credit
C5	Credit
C6	Credit
D7	Pass
E8	Pass
F9	Fail

Source: WAEC, Owerri (2008)

**Fig. 1.2 ANALYSIS OF (WASSCE) ECONOMICS RESULT IN IMO STATE (2009-2014).**

Year	Number of Candidates registered In Economics	GRADE POINTS										
		ALPHA		CREDIT		PASS						
		Total Of Alpha	% of Alpha	Total Of Credit	% of Credit	Total Of pass	% Of pass	F9	Total No. of passes	Total No. of Failure	% No. of passes	No. of Failure
2009	1,683	28	1.6	420	24.9	626	37.1	486	1074	609	63.8	36.2
2010	2,373	14	0.5	285	12.0	1129	47.5	804	1418	955	59.7	41.2
2011	1,642	48	2.9	542	33.0	759	46.2	303	1361	281	82.7	41.2
2012	1,878	167	8.8	591	31.4	897	47.7	182	1655	223	88.1	11.8
2013	1,878	53	2.8	807	42.9	736	39.1	200	1600	278	85.1	14.8
2014	1,590	61	3.8	572	35.9	713	44.8	84	1346	244	84.6	15.3

Source: Ministry of Education, Owerri (Statistics Division, 2009-2014)

**Fig. 1.2 above reveals the analysis of Economics result in West Africa Senior Secondary School Certificate Examination of 20 sampled Secondary Schools in the three Educational Zones of Imo State. This fig. substantiates the students’ poor performance in Economics**

Looking at column 4, 6 and 8 of the table, percentage of pass grade increase more than alpha and credit grades respectively. This shows that students do not perform well. This will imply that students are not taught with the appropriate lesson methods and relevant instructional materials.

Economics requires all forms of innovative means and techniques in all its teaching in order to effectively utilize its functionality in the realms of human learning, behaviour, change and modification. With the globalization and the world becoming a global village as enhanced by the internet, a bridge is needed across the digital divide in the teaching process between the conventional chalkboard approach and improved new approaches.

**Theoretical Framework**

The theoretical base of this work stems from constructivist approach. Piaget and Vygotsky were frequently cited as foundational influences on the development of this perspective. Because of the importance of social and cultural influences in Vygotsky’s theory, it is toward a socio-cultural approach to learning and the branch that follows this theory is termed social construction (Molenda, 2009). The theory views learning as a process in which learners construct their own reality or at least interpret it based upon their perceptions of experiences, so an individual knowledge is a function of one’s prior experiences, mental structures and beliefs that are used to interpret objects and events (Molenda, 2009). The assumptions of this theory are:

- Knowledge is constructed from experience,
- Learning is a personal interpretation of the world,

- Learning is an active process in which meaning is developed on the basis of experience,
- Conceptual growth comes from the negotiation of meaning, the sharing of multiple perspectives and the changing of internal representation through collaborating learning.
- Learning should be situated in realistic settings, testing should be integrated with the task and not a separate activity (Molenda, 2009).

Constructivism recommended instructional strategies that followed several broad principles. Supporting the above statement, Driscoll (2000, pp. 394-395) states that constructivism:

- 1) Embed Learning in complex, realistic and relevant environments,
- 2) Provide for social negotiation as an integral part of learning,
- 3) Support multiple perspectives and the use of multiple modes of representation,
- 4) Encourage ownership in learning,
- 5) Nurture self-awareness of the knowledge construction processes.

At least the first three of these principles lend themselves better to technology-based delivery than face-to-face conventional instruction. Firstly, complex realistic environments (or micro worlds) can be created using simulation software. Secondly, e-mail, chatrooms and threaded discussions can facilitate social negotiation. Thirdly, the World Wide Web platform enables designer to link pictures and moving animation clips to verbal presentations, all of which can be navigated according to individual needs and interests. Power point lesson presentation has been proved to be a powerful tool in the hands of both teachers and students to enhance both teaching and learning. This development is supported by the theory of constructivism, a philosophy that perceives learning as a process of adjusting mental models to accommodate new experiences, constructing knowledge, developing thinking skills, building learners' ability to reflect and generating strategies for defining a problem and working out solutions.

### **Instructional Technology**

Today, in education, technology is being widely applied to satisfy one of man's basic needs- to know. One of such applications which is of recent origin is in the area of designing and managing instruction in a systematic manner-a field now known as instructional technology (Fox, 2005).

The history of Instructional Technology started in the early 1900s, while others could be traced back to the 1600s. This depends on the definition of Instructional Technology. Definition that focuses on systems approach tends to reach further back in history, while those definitions focused on sensory devices are relatively more recent. The use of audio and visual instruction was boosted as a military response to the problem of a labour shortage during World War (WWII) in the United States. There was a definitive need to fill the factories with skilled labour; Instructional Technology provided a methodology for training in a systematic and efficient manner. With it came to the use of highly structured manuals, instructional films and standardized tests (Wikipedia, 2009).

Garrison and Anderson (as cited in wikipedia, 2009) affirm that Instructional Technology

is “a growing field of study which uses technology as a means to solve educational challenges, both in the classroom and in distance learning environment”. Concluding, they state that Instructional Technology promises solutions to many educational problems; resistance from faculty and administrators to the use of technology in the classroom is not unusual. This reaction can arise from the belief-or fear-that the ultimate aim of Instructional Technology is to reduce or even remove the human element of instruction.

According to Heinich, Molenda and Russell (1993, p. 345), the term Technology of Instruction refers to “a teaching/learning pattern designed to provide reliable and effective instruction to each learner through application of scientific principles of human learning”. Some Technologies of Instruction incorporate audio visual media, others do not. Some employ electronic or mechanic devices. However, most Instructional Technologists would find out that education will always require human intervention from instructors or facilitators.

### **Instructional Design**

Instruction is a human undertaking whose purpose is to help people learn. Although learning may happen without any instruction, the effects of instruction on learning are often beneficial and usually easy to observe. When instruction is designed to accomplish a particular goal of learning, it may or may not be successful (Gagne, Brigge & Wagner (1992, p. 3).

Instruction is a set of events that affects learners in such a way that learning is facilitated. Normally, we think of these events as being external to the learner-events embodied in the display of printed pages or the talk of a teacher. However, the events that make up instruction may be partly internal when they constitute the learner’s activity called “self-instruction” (Gagne et al, 1992, p. 3).

Instruction must be planned if it is to be effective. However, instruction is usually planned, which means that it is designed in some systematic way. Despite varying moment-to-moment decisions, a teacher follows the plan of a lesson design. The lesson is part of the larger design involved in the presentation of a topic (a course segment) and this topic in turn makes up part of still more comprehensive design of the course or curriculum. The purpose of designing instruction is to activate and support the learning of the individual student. This aim is characteristic of instruction wherever it occurs, whether between a tutor and single student, in a school classroom, in an adult interest group or in an on-the-job setting (Gagne et al, 1992, p. 4).

Instruction for the support of learning must be something that is planned rather than hazard. The learning it aids should bring all individuals closer to the goals of optimal use of their talents, enjoyment of life and adjustment to the physical and social environment. Naturally, this does not mean that the planning of instruction will have the effect of making different individuals more alike. On the contrary, diversity among individuals will be enhanced. The purpose of planned instruction is to help each person develop as truly as possible in his or her own individual direction (Gagne et al, 1992, p. 4).

The belief is that an effective instructional plan serves as a good basis for the eventual effectiveness of the total instruction (Imogie, 1988, p. 49). In line with the above, Onyejemezi

(as cited in Owuamanam, 2016, p. 91) outlined the following as the essential ingredients of instructional design:

- Identify the educational problem to be solved or the educational activity to be undertaken,
- State the objectives to be achieved in solving the problem or undertaking the educational activity,
- Indicate the conditions necessary for the achievement of the objectives,
- Map out appropriate method/strategies and material resources to be used in other to achieve the objectives,
- Design the way of knowing whether or not the objectives are achieved,
- Implement or try out the prepared package or solution to the identified educational problem or task,
- Determine whether the objectives have been achieved (evaluation),
- Recycle the activity especially where objectives have not been achieved
- Retain and apply the design in the solution of similar problem.

Instruction when designed activates and supports the learning of the individual. The Power point lesson presentation if designed presents the essential information (lesson) in a variety of media and in an interactive manner that avoids the distractions inherent in chalkboard method.

### **The Chalkboard**

The chalkboard formerly known as blackboard is one of the oldest and most commonly used teaching devices over the world. The term blackboard is inappropriate since the chalkboard surface is now available in colours other than black (Onyejemezi, 1996, p. 451). Owing to its simplicity of construction, the chalkboard is readily available in every classroom and immediately ready for use by the teacher. Akude (2004, p. 70) sees chalkboard “as a visual material that is highly indispensable to the teacher”. According to him, the teacher uses it extensively for his instruction, for the dissemination and the presentation of relevant illustrations. Chalkboards are available in different sizes and kinds.

According to Ifegbo (2006, pp.210-211), chalkboards are of two kinds namely: Movable chalkboards and fixed chalkboards. Movable chalkboards are mounted on easels or wooden legs. The heights of the boards on the easels can be adjusted to suit the eye levels of the learners by relocating the pins in the perforated holes on the easels or legs of the movable chalkboards. In other words, the chalkboard can be fixed to two legs provided with rollers. The both sides of mobile or movable chalkboards are used during lesson delivery. Fixed chalkboards are permanently fixed to the wall of the classroom.

### **Power point**

Power point is a presentation software programme that is part of the Microsoft office package. Power point uses a graphical approach to presentation in the form of slide shows that accompany the oral delivery of the topic (Russell, 2007). This programme is widely used in business and classroom and is an effective tool when used for training purposes. Power point is

one of the simplest computer programmes to learn. It is the number one programme used worldwide for presentations (Russell, 2007). Anyone can create stunning presentations that look like they were designed by a professional. Power point presentation can be made into photo albums, complete with music or narrations, to distribute on Compact Disc (CD) and Digital Video Divides (DVDs).

Power point has printing options that allow the presenter to provide handouts and outlines for the audience as well as notes pages for the speaker to refer to during the presentation. All in all, Power point is a “one-stop-shop” to create successful presentation for the business world, the classroom or just for your own personal use (Russell, 2007). However, Voss (2004) sees Power point as “a complete presentation graphics package”. It gives you everything you need to produce a professional looking. Power point offers word processing, outing, drawing, graphing and presentation management tools-all designed to be easy to use and learn. The following gives a quick overview of what can be done in Power point.

- When you create a presentation using Power point, the presentation is made up of a series of slides. The slide that you create using Power point can also be presented as overhead transparencies or 35 mm and slides,
- In addition to slides, you can print audience handouts, outlines and speakers’ notes,
- You can format all the slides in a presentation using the powerful slide master which will be covered in the tutorial.
- You can keep your entire presentation in a single file or your slide, speaker notes and audience handout, and
- You can import what you have created in other Microsoft products, such as word and excel into any of your slides (Voss, 2004).

Fisher (2003) sees power point as “an amazing tool for learning in both a student and teacher directed situation. It can add new dimension to learning, allowing teachers to explain abstract concepts while accommodating all learning styles in Secondary Schools. In explaining further, Fisher posits that:

“When used properly, Power point can be one of the most powerful tools for disseminating information ever known. When it comes to enhancing learning, chalkboards are good, overhead transparencies are better, but Power point is the best. Using Power point in the classroom addresses different styles, heightens students’ zeal and engages learners in active classroom work. It is a fun and motivational tool for teachers as well as students. It also creates captivating and attention – grabbing presentations”.

Fisher (2003) mentioned various ways in which Power point can be used in the classroom. These include:

- Initial teaching,

- Practice and Drill,
- Review
- Text.

Power point is fun and can also be used in a wide variety of ways by teachers and students. Examples are:

- Research findings,
- Lecturer notes,
- Book reports,
- Introduction to course instructor
- Classroom game shows.

Power point can be a useful tool when it is used to display images that students normally would not be able to see or when instructors use it as an outline to keep them focused on their teaching and also give the students an idea of what to expect (Voss, 2004). Simon (2004) gave the following recommendations for using Power point:

- If you have to use Power point, strive for an extreme minimalism,
- Avoid animation, background and clipart,
- Try to use full sentences with both a subject and a verb,
- Convert the sentences into paragraphs, and
- Avoid bullets, accept for occasional short lists.

### **Statement of the Problem**

Presently students do not perform well in economics in external examination. A reference has been made to the WASSCE result in Imo State from 2009-2014 in which students' academic performance in economics at alpha and credit levels were poor. For example, in 2009 WASSCE result, percentage alpha grade was 1.6 credit grade was 24.9 while pass grade was 37.1. In 2014, percentage of alpha grade was 3.8, credit level was 35.9 while pass grade was 44.8 (see Fig. 1.2). This will imply that students are not taught with the appropriate lesson methods and relevant instructional materials. Thus, the study seeks to investigate the extent students would respond positively to the use of Power point lesson presentation and the differences that exist between the use of Power point presentation and Chalkboard approach on student's performance.

### **Purpose of the Study**

The purpose of the study is to compare the impact of using Power point lesson approach and the Traditional Chalkboard presentation in the teaching of economics in Senior Secondary Schools. The following are the specific objectives:

- To find out the extent which students would respond positively to the Power point presentation,

- To find out the difference that exists between the use of Power point presentation and chalkboard approach on students' performance.

### Research Questions

1. What are the mean affective response scores of students taught economics with Power point lesson presentation and those taught economics with Chalkboard approach?
2. What differences exist in the mean scores of students taught economics using Power point and those taught using Chalkboard in a researcher – made economics achievement test?

### Hypothesis

Ho: The mean scores in the researcher – made economics test of students taught economics using Power point lesson presentation and Chalk board approach do not differ significantly ( $P < 0.05$ )

### Methodology

Design: the research design is quasi experimental design. The design model that was used for the study is the post – tests only control group design. This is because the study compared the effectiveness of Power point and Chalkboard presentations in teaching Secondary School economics. The design is represented symbolically as:

Class		Treatment		Post-test
Rg <sub>1</sub>	-	X <sub>1</sub>	-	O <sub>1</sub>
Rg <sub>2</sub>	-	X <sub>2</sub>	-	O <sub>1</sub>

Where X<sub>1</sub>: indicates the Power Point lesson presentation (i.e. the group that was taught economics with Power Point).

= X<sub>2</sub>: indicates the Chalkboard lesson presentation (i.e. the group that was taught economics using the Chalkboard).

O<sub>1</sub>: indicates Post-test (i.e. the researcher – made test after treatment).

**Participants:** The population comprises the entire SSII students studying economics in Senior Secondary Schools in Owerri Educational Zone of Imo State. The sample consists of SSII students of economics in Community Secondary School Umuonyeali in Mbaitoli Local Government Area. The SSII class was made up of 40 students comprising 20 males and 20 females. The 40 students were randomly grouped into two.

**Instrument:** Two instruments were used for the study. The first instrument for data collection was the researcher-made-multiple-choice questions that were administered to test the cognitive ability of the students. The second instrument was a ten-item questionnaire on effective responses for the students exposed to both Power point and chalkboard lesson

methods respectively. The multiple-choice questions were drawn from the unit of instruction taught during the course of instruction. After the units of instructions were taught, the text instrument developed by the researcher was administered on the subjects. This determined the effects of treatment on group  $X_1$  and  $X_2$  (Power point group and Chalkboard respectively. The tests were the same for the two groups.

The second instrument for the data collection was the Affective Response Questionnaire. The questionnaire items were designed to find out how students who were exposed to the use Power point lessons and chalkboard teaching method felt respectively. The questionnaire was made using a four-point modified likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The affective response questionnaire items were 10 in number. The Kuder-Richardson Co-efficient Reliability Index was used to calculate the reliability indices of the multiple-choice questions while Spearman Brown Rank Order Correlation Co-efficient Method was used to calculate the reliability indices of the affective response questionnaire. The tests were certified by the reliability tests that yielded 0.93 and  $\approx$  9.3 respectively. Hence, the results of the tests made both instruments suitable for data collection.

**Analysis:** Two research questions were addressed and one hypothesis formulated to guide the research. In analyzing the research questions therefore, the mean scores were used. The hypothesis was tested with the use of t-test statistics of significant difference between two sample means.

**Result:** Research Question One: what are the mean affective response scores of students taught economics using Power point lesson presentation and those taught economics using Chalkboard lesson approach?

**Table 1.1: The mean affective response scores of students taught economics using chalkboard lesson approach?**

S/N	Items										Sums	Means
	1	2	3	4	5	6	7	8	9	10		
1	4	3	3	4	4	3	3	3	4	4	35	3.5
2	4	4	4	4	3	3	3	3	4	4	36	3.6
3	3	4	3	4	3	4	3	4	3	3	34	3.4
4	3	4	4	3	3	4	3	4	4	4	36	3.6
5	4	4	4	3	4	3	4	3	4	3	36	3.6
6	3	3	3	4	4	4	3	4	4	4	39	3.9
7	4	4	4	4	4	4	3	4	4	4	39	3.9
8	4	4	4	4	4	4	3	4	4	4	39	3.9
9	3	4	3	4	4	3	4	3	4	3	35	3.5
10	4	4	3	4	4	3	3	4	4	4	37	3.7
11	3	3	3	4	4	3	3	3	4	4	34	3.4
12	4	4	4	4	4	4	3	4	4	4	39	3.9
13	4	4	4	4	4	4	3	4	4	4	39	3.9
14	3	3	3	4	3	3	4	3	4	4	34	3.4
15	4	4	4	4	4	4	3	4	4	4	39	3.9
16	4	3	4	3	4	3	4	3	4	4	36	3.6

17	3	4	3	3	4	4	4	4	4	4	37	3.7
18	4	4	4	4	3	3	3	4	4	4	37	3.7
19	3	4	3	4	4	4	3	3	3	4	35	3.5
20	4	4	4	4	4	4	3	4	4	4	39	3.9
Sum of means											73.2	
Mean of means											3.66	

The mean of the means of the responses is 3.66 and this falls between strongly Agree (SA) and Agree (A) scale of the likert scale. For this reason, the use of Power point lesson presentation in the learning of economics attracted a highly positive response.

**Table1.2: The mean affective response scores of students taught economics with chalkboard lesson presentation.**

Items												
S/N	1	2	3	4	5	6	7	8	9	10	Sums	Means
1	2	1	1	1	1	2	2	1	1	1	13	1.3
2	3	3	1	2	1	2	2	1	1	2	18	1.8
3	2	1	1	1	1	2	2	1	1	1	13	1.3
4	2	1	1	1	1	2	2	1	1	1	13	1.3
5	1	1	1	1	1	1	2	1	1	1	11	1.1
6	2	2	1	2	1	2	2	1	1	1	15	1.5
7	2	1	1	1	2	2	2	1	1	2	15	1.5
8	1	2	1	1	1	1	2	1	1	1	12	1.2
9	2	2	2	2	2	1	2	2	2	2	19	1.9
10	2	1	1	1	1	1	2	2	1	1	14	1.4
11	2	2	2	2	2	1	2	2	2	2	19	1.9
12	1	1	1	1	1	2	2	1	1	2	12	1.2
13	2	3	1	1	1	2	2	1	1	1	17	1.7
14	3	3	2	2	3	1	2	1	1	1	20	2.0
15	1	1	1	1	1	1	2	1	1	1	11	1.1
16	1	2	1	1	1	2	2	1	2	1	15	1.5
17	2	2	2	2	2	2	2	1	2	1	19	1.9
18	1	1	1	1	1	1	2	1	1	1	11	1.1
19	3	3	1	1	2	1	2	1	1	2	17	1.7
20	2	1	1	1	1	1	2	1	2	1	13	1.3
Sum of Means											29.7	
Mean of Means											1.48	

The sum of the mean of the response is 29.7. The mean of the means of the responses is 1.48 and this falls into Strongly Disagree of the likert scale. Hence, the responses of the students in learning economics using chalkboard lesson approach were highly negative.

Research Question Two: what differences exist in the mean scores of students taught economics lessons using Power point and those taught economics using chalkboard in a researcher made achievement test?

**Table 2: The mean scores of students taught economics using Power point and chalkboard respectively.**

Variable	$\bar{X}$	$\bar{X}$ -difference
Power Point	33.6	
Chalkboard	23.0	10.6

Table 2: Showed that the Power point mean was (33.6) and that of chalkboard was (23.0). Their mean difference was (10.6). The result is that Power point was on the higher side.

**Hypothesis:** The mean scores in the researcher-made economics test of students taught economics using Power point lesson presentation and chalkboard do not differ significantly.

**Table 3: Result of t-test analysis testing the hypothesis that the mean scores in the researcher-made economics test of students taught economics with Power point and Chalkboard approaches do not differ significantly.**

Group	N	$\bar{X}$	SD	DF	t-crit	t-cal	LS	Std. Error	Decision
Power point	20	33.6	8.11		2.02				
				38		4.27		2.48	
							0.05		Reject
Chalkboard	20	23	7.57						

T-calculated = 4.27

Critical = 2.02

The result of t-test analysis as presented in table 3 showed that t-calculated value (4.27) is greater than the t-critical value (2.02). This result rejects the null hypothesis and accepts the alternative that there is significant difference in the mean scores of the students taught with Power point and those taught with chalkboard respectively.

**Discussion**

The result of the analysis presented in Table 1.1 and 1.2 revealed that Power point lesson presentation was positive in its mode of delivery while chalkboard was negative. The above agree with Suydam (as cited in Jarrel, 1998) that Power point can offer adolescents a bridge from concrete to abstract thinking, enabling them to observe and create multiple representations of mathematical ideas, numerically, graphically and symbolically. This discovery also agrees with the research findings and conclusions of (Meghan & Rachel, 2004) in the investigation of the effectiveness of the use of Power point in the E314L classroom. The findings establish the fact that Power point lesson approach when properly used and effectively applied bring about constructive and positive change in both teachers and learners in such areas as:

- a) Computer-Assisted Teaching (CAT) which facilitates research work, self-updating in knowledge, class notes and lesson delivery.

- b) Computer-Assisted Learning (CAL) whereby learning is made easier through the use of small number of words in as many slides as possible to improve understanding.

The result as shown in Table 2 and the analysis of the hypothesis revealed that the students that were exposed to Power point lesson approach performed better than the students exposed to Chalkboard approach. This conclusion is in line with the conclusion of Meghan et al (2004) who affirmed that the use of Power point is an effective educational tool for technology – driven teaching and learning situations.

Presenting lessons bit-by-bit or template by template makes it easier for students to follow and grasp the lesson. Nigerian children want to be taught by radically new educational programmes, methods and a variety of educational contents with multimedia playing key role. The study presents Power point as the multimedia application that should serve as a springboard for the students potentials in the present technology age.

### **Conclusion**

It has been established from the findings of the study that the use of Power point is an effective instructional material for learning economics and that Power point lesson presentation is a better alternative to the Chalkboard lesson approach. It can offer adolescents a bridge from concrete to abstract thinking, enabling them to observe and create multiple representations of mathematical ideas, numerically, graphically and symbolically. It covers more units at a time, addresses different styles, heightens learners' zeal and engages learners in active classroom work.

### **Recommendations**

Based on the findings, the following recommendations are made.

1. Power point should become the dominant lesson presentation method in all subject areas in our secondary schools.
2. The government should increase finding for the procurement of the necessary educational technology resources in our secondary schools like the computer and its accessories.
3. The regular training for teachers should be put in place and that should include basic computer operations, programming and teaching methodologies and re-training to integrate Information and Communication Technologies (ICTs) technique into instructional approaches.
4. In response to the present technology age, the secondary school curriculum should be restructured in order to integrate multimedia applications like the Power point into the teaching and learning processes.
5. Reward for resourceful teachers. It is beyond doubt that reward leads to increased motivation, which in turn, leads to enhanced performance. If resourceful teachers who consistently apply Power point when teaching economics are reasonably rewarded, others are likely to be encouraged to emulate them. This will help to increase the

academic performance of students in economics. The reward may be in any form- including praises, award of honours, medals, cash prizes and promotion.

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