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# USE OF MULTIMEDIA IN TEACHING AND LEARNING OF POLITICAL SCIENCE IN UNIVERSITY OF UYO, AKWA IBOM STATE, NIGERIA

**Abstract**: This paper examines the use of multimedia in teaching and learning of political science in University of Uyo, Akwa Ibom State, Nigeria. A survey research was adopted and the tool employed for this research study was a questionnaire titled "Use of Multimedia in Teaching and Learning of Political Science in University of Uyo" (UMTLPSUU). Percentage and independent T-Test were used to analyze the data collected. The data from the study revealed Cds, projector, computer and sound system are available Instructional Multimedia in their respective faculties with 62(66.2%), 76(81.7%) and 69(74.2%) of the respondents affirming it respectively. The study further revealed that, the majority of the respondents do not know the exact number of computer sets available in the department. It was also revealed that between one to five sound systems were available in their department. And the use of computers for teaching in the department is "not very often", same with projectors as indicated by the majority of the respondents. Also, it was revealed that computer sets, sound systems, and use of simulation and projectors were not adequate in the department. This implies that the small number of instructional multimedia in the department has little or no effect on students' participation in class activities and their academic performances. Finally, the study revealed that the factors that limit the use of multimedia by lecturers in political science include none supportive, inadequate knowledge of the use of multimedia in teaching and learning of political science and the lack of understanding on the benefits of multimedia facilities limit the use of multimedia in teaching and learning of political science. The study recommended that the Nigerian (Federal) government should see multimedia integration effort at the university as an embracing project to development in education and should support by allocating and releasing adequate funds to invest in massive Internet connectivity, as well as purchase and installation of ICT infrastructures. Also, the university must aim to ensure accessibility, availability and reliability of ICT facilities so that every lecture room and staff offices have computers linked to Internet and have equipment appropriate for accessing a range of electronic resources. The Federal Government can also help by subsiding or reducing the tariffs on import of ICT facilities so that lecturers and others can afford to purchase these ICT facilities and accessories since the price would be lower. It is also being recommended that the University lecturers be exposed to a series of training and development skills in the use of these high technology facilities. Finally, adequate, competent and experienced ICT technical staff must be made available should problems arise.

**Keywords:** multimedia, teaching and learning.

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## Introduction

The ICT (Information and Communication Technology) revolution is fast changing the world, and creating a generation that is media-hungry and technologically savvy. This new generation is using digital media for learning and communicating (Tapscott, 2008). Business, industry, the military and educational institutions have recognized this potential and used computers as instructional tools. However, in the context of education, technology also refers to the process of applying the tools for educational purposes. In other words, "educational technology is a combination of the processes and tools involved in addressing educational needs and problems, with an emphasis on applying the most current tools: computers and their related technologies" (Roblyer & Edwards, 2000).

The advent of multimedia and multimedia technologies has changed the way educators teach and students learn. With multimedia, the communication of the information can be done in a more effective manner and it can be an effective instructional medium for delivering information. Multimedia application design offers new insights into the learning process of the designer and forces him or her to represent information and knowledge in a new and innovative way (Neo & Neo, 2000). The use of multimedia as a platform for teaching is made even more possible with the availability of the MPCs (Multimedia PCs) that are powerful, fast, and able to process all media elements effortlessly and quickly, and multimedia software packages that are user-friendly yet power-packed.

Multimedia "provides a means to supplement a presenter's efforts to garner attention, increase retention, improve comprehension, and to bring an audience into agreement", which consequently results in people remembering 20% of what they see, 40% of what they see and hear, but about 75% of what they see and hear and do simultaneously (Lindstrom, 2004). The use of multimedia in teaching and learning enabled teachers to stimulate final outcomes and assist students in applying knowledge learned from textbooks, thereby compensating for the deficiency of traditional teaching methods. Multimedia is now permeating the educational system as a tool for effective teaching and learning. With multimedia, the communication of information can be done in a more effective manner and it can be an effective instructional medium for delivering information. Multimedia access to knowledge is one of the possibilities of information and communication technology that has tremendous impact on learning. The instructional media have emerged in a variety of resources, and equipment, which can be used to supplement or complement the teachers' efforts in ensuring effective learning by students. It is recognized that conventional media technologies can no longer meet the needs of our teaching and learning processes; as a result they are being replaced by multimedia technology. This technology provides a learning environment that is self-paced, learner-controlled and individualized.

Multimedia in Education has been extremely effective in teaching individuals a wide range of subjects. Multimedia is changing the way we communicate with each other. The way we send and receive messages is more effectively done and better comprehended. While a lecture can be extremely informative, a lecture that integrates pictures or video images can help an individual learn and retain information much more effectively. Using interactive CD-ROMs can be extremely effective in teaching students a wide variety of disciplines, most notably languages and music.

A multi-sensory experience can be created for the audience, which in turn, elicits positive attitudes towards its application (Neo & Neo, 2001). Multimedia has also been shown to elicit the highest rate of information retention and result in shorter learning time (Ng & Komiya, 2000).

On the part of the creator, designing a multimedia application that is interactive and multi-sensory can be both a challenge and thrill. Multimedia application design offers new insights into the learning process of the designer and forces him or her to represent information and knowledge in a new and innovative way.

However, information technology application serves different purposes, such as knowledge sharing-portal, search engines, public administration, social service and business solution. Oshodi (2000) posits that awareness created towards the use of information and communication technology over the years is increasing in the classroom learning environment in the third world such that mere verbalization of words alone in the classroom to communicate ideas, skills and attitude to educate learner is futile.

Omagbemi (2004) supporting this view expressed that access to multimedia information could stimulate changes and creates conductive learning environment and make learning more meaningful and responsive to the localized and specific needs of learners.

The emphasis of multimedia design and development has been on the presentation of information in multiple formats (Hede & Hede, 2002). There are a number of overlapping definitions of multimedia. According to Doolittle (2001), "web-based multimedia represents the presentation of instruction that involves more than one delivery media, presentation mode, and/or sensory modality. Multimedia has also been defined as "the use of multiple forms of media presentation" (Schwartz & Beichner, 2000) and "text with at least one of the following: audio or sophisticated sound, music, video, graphics" (Maddux, Johnson & Willis, 2001). Although numerous definitions exist to capture the essence and meaning of multimedia, "one commonality among all multimedia definitions involves the integration of more than one media" (Jonassen, 2000). Examples of multimedia includes but are not limited to text in combination with graphics, audio, music, video, and or animation.

The teaching and learning of political science over the years has been delivered mechanically or by rote learning, which makes instruction teacher-centered. Hardly can vital abstract contents in Political Science be effectively communicated to the learners theoretically. They need to be taught using relevant materials. The teacher in his/her method of teaching may have being a major source of students' poor academic performance in Political Science. Most teachers still prefer using the 'chalk and talk' method in instructing learners. Although Multimedia could facilitate meaningful learning of Political Science, it is rarely used, whereas this method is considered as a good strategy for improving cognition. A good deal of expected learning outcomes is not realized in Political Science in our university as a result of non-availability of instructional materials as well as lack of effective utilization of appropriate teaching materials (Nwagbo, 2008).

**Statement of the Problem**

There is an urgent need to improve the quality of education to bridge the gap between developed and developing nations, and multimedia instruction is considered as a necessary tool for this purpose. However, the presence of multimedia alone will not stimulate significant changes in a school. Teachers are an important ingredient in the implementation of

multimedia instruction in education. Without the involvement of teachers, most students may not take advantage of all the available potential benefits of multimedia on their own. Teachers need to actively participate in the use of multimedia facilities. They have to be trained in the use of multimedia and in its integration in the classroom activities to enhance thinking and creativity among students. They must also learn to facilitate and encourage students by making them responsible for their own learning. Many of the current graduates were found to be lacking in creativity, communications skills, analytical and critical thinking and problem – solving skills (Teo & Wong, 2000). In this study, attempts are therefore made at examining such issues as are pertinent to the use of multimedia in teaching and learning of Political Science in institution of higher learning, a case study of University of Uyo, Akwa Ibom State, Nigeria.

Specifically, the objectives of this study are to:

1. Determine the availability of instructional multimedia in the department of Political Science for teaching and learning.
2. Determine the pattern and frequency of use of multimedia by in the department of Political Science for teaching and learning.
3. Investigate the adequacy of multimedia facilities for teaching and learning in the department of Political Science for teaching and learning.
4. Identify factors, if any, which limit the use of multimedia by the university lecturers in the department of Political Science.

The fact remains that the use of multimedia in teaching and learning enhance effectiveness and improves performance of students in the country today. Multimedia teaching has been believed to provide various techniques and method for lesson planning and to assist classroom instruction with improved visualization and representation.

This study is therefore significant in that it will examine and hopefully reveal the effect of the use of multimedia in teaching and learning, and its implication on the academic performance of students and also make recommendation as to how best to use multimedia in teaching, so as to create a conductive atmosphere for teaching.

This study did not in any way investigate the problems that lead to student's unrest in the primary and secondary schools in Uyo rather it is restricted to an institution of higher learning in Uyo. Indeed the University of Uyo is selected to be the case study.

**Research Questions:**

1. How available are the instructional multimedia for teaching and learning of Political Science?
2. What is the pattern and frequency of use of multimedia for teaching and learning of Political Science?
3. How adequate are the multimedia facilities for teaching and learning of Political Science for teaching and learning?
4. What factors limit the use of multimedia by lecturers in Political Science?

**Hypotheses:**

HO1: There is no significant influence of availability of instructional multimedia on students' academic performance.

HO2: There is no significant influence of the use of audio-visual on students' effective learning of Political Science.

HO3: There is no significant influence of the use of animation on students' activeness during lesson period.

HO4: There is no significant influence of limited simulation on the academic performance of students.

## Methodology

The research set out fundamentally to study the use of multimedia in teaching and learning of political science in institution of higher learning in University of Uyo, Akwa Ibom State.

The study employed the use of descriptive survey design. An instrument was developed which contained items and was use for gathering information from the respondents.

Population for this study comprises of the students studying political science in University of Uyo, both from Faculty of Education and Faculty of Social Science. The population studied was 713 students.

The simple random sampling technique was used. The simple random sampling technique is a process whereby every member has an equal chance of being selected in order to eliminate the possibility of being biased. The total number of all the students was 713 students out of which 143 are to be sampled which represent 20 percent of the total population, (95 student from Faculty of Social Science and 48 students from Faculty of Education) and 93 questionnaires was fully completed and returned to the researchers.

The tool employed for this research study was a questionnaire titled "Use of Multimedia in Teaching and Learning of Political Science in University of Uyo" (UMTLPSUU). The questionnaire had 24 Items, the instrument was written in simple language in order to facilitate comprehension by the respondents. The respondents were required to give "Yes" or "No" answers. The questionnaire was divided into two parts.

In the course of this research, questionnaire was used to enable the researcher obtain information needed. However, secondary data such as textbooks, academic journals, information booklet were used to supplement that data collected.

The analysis of data based on responses from the respondents, simple percentage and was used to answer the research questions and T-test was used to answer the research hypotheses.

## Presentation and Analysis of Data

### Demographic factors of the respondents

#### Gender of respondents

**Table 1: Distribution of respondents based on gender**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| Male | 39 | 41.9 |
| Female | 54 | 58.1 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 1 indicates that 39(41.9%) of the respondents were male while 54(58.1%) of the respondents were female. This implies that the majority of the respondents were female.

### Age of respondents

**Table 2: Distribution of respondents based on age**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| 16 - 20years | 27 | 29.0 |
| 21 – 25years | 39 | 41.9 |
| 26 – 30years | 21 | 22.6 |
| 31 - 35years | 6 | 6.5 |
| 36years and above | - | - |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 2 shows that 27(29.0%) of the respondents were between the ages of 16 - 20 years. 39(41.9%) of the respondents were within the age range of 21 – 25 years, while 21(22.6%) of the respondents were within the age range of 26 – 30 years and 6(6.5%) of the respondents were within 31 and 35years. This implies that majority of the respondents' age ranges from 21 – 25 years.

### Faculties of respondents

**Table 3: Distribution of respondents based on their faculties**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| Education | 38 | 40.9 |
| Social Sciences | 55 | 59.1 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 3 reveals that 38(40.9%) of the respondents were from Faculty of Education and 55(59.1%) of the respondents from were from the Faculty of Social Sciences. This implies that the majority of the respondents were from the Faculty of Social Sciences.

### Class level of respondents

**Table 4: Distribution of respondents based on class level**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| 100 Level | 31 | 33.3 |
| 200 Level | 22 | 23.7 |
| 300 Levels | 24 | 25.8 |
| 400 Levels | 16 | 17.2 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 4 reveals that 31(33.3%) of the respondents are in 100 level in their respective faculties. 22(23.7%) of the respondents are in 200 level from their respective faculties, while 24(25.8%) of the respondents are in 300 level from their respective faculties and 16(17.2%) of the respondents are in 400 level from their respective faculties. This implies that the majority of

the respondents is in their first year in school and tends to understand the questions and answer them very well.

**RESEARCH QUESTION ONE**

**How available are the Instructional Multimedia for teaching and learning of Political Science?**

**Table 5: Responses on the availability of Instructional Multimedia for teaching and learning of Political Science**

| S/N | Items | No. of respondents (Yes)(n=93) | Percentage (%) | No. of respondents (No)(n=93) | Percentage (%) |
|---|---|---|---|---|---|
| 1 | Is there any instructional multimedia e.g. CDs, etc? | 81 | 87.1 | 12 | 12.9 |
| 2 | Projector | 62 | 66.7 | 31 | 33.3 |
| 3 | Computer | 76 | 81.7 | 17 | 18.3 |
| 4 | Sound System | 69 | 74.2 | 24 | 25.8 |

**Source:** *Field Survey, June 2016.*

Table 5 above reveals that 81(87.1%) of the respondents said "Yes", instructional multimedia like Cds, etc are available in these faculties for use while 12(12.7%) of the respondents said "No". The same table above also reveals that other instructional multimedia like projector, computer and sound system are available in their respective faculties with 62(66.2%), 76(81.7%) and 69(74.2%) of the respondents affirming it respectively while 31(33.3%), 17(18.3%) and 24(25.8%) of the respondents said "No" on the availability of projector, computer and sound system in their faculties respectively.

This implies that the majority of the students indicated that there are Cds, projectors, computer and sound system in their faculties for use by the lecturers for teaching.

**Table 6: Responses on the use of Instructional Multimedia for teaching and learning of Political Science**

| S/N | Items | No. of respondents (Yes)(n=93) | Percentage (%) | No. of respondents (No)(n=93) | Percentage (%) |
|---|---|---|---|---|---|
| 1 | Do lecturers use computer for teaching in the department of political science? | - | - | 93 | 100 |
| 2 | Do lecturers use projector for teaching in the department of political science? | 26 | 28.0 | 67 | 72.0 |
| 3 | Do lecturers use sound system for teaching in the department of political science? | 71 | 76.3 | 22 | 23.7 |

**Source:** *Field Survey, June 2016.*

Table 6 further reveals that 93(100%) of the respondents indicated "No" on the use of computer for teaching in the department of political science. On the use of projector by lecturers in the department for teaching, 26(28%) of the respondents said "Yes" while 67(72.%) of the respondents said "No". And on the use of sound system by lecturers during teaching, the table above shows that 71(76.3%) of the respondents actually said "Yes" and 22(23.7%) of the respondents said "No".

This implies that lectures in the faculty do not use computer for teaching and same with the projector but however, use sound system for teaching.

**RESEARCH QUESTION TWO**

**The pattern and frequency of use of multimedia for teaching and learning by lecturers in the political science?**

Table 7: Responses based on how many computer sets are in the department of political science for teaching and learning

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| 1 – 5 | 16 | 17.2 |
| 6 – 10 | 9 | 9.7 |
| 11 – 15 | 11 | 11.8 |
| 16 and above | - | - |
| Unknown | 57 | 61.3 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 7 reveals that 16(17.2%) of the respondents said there are 1 – 5 computer sets available in the department of political science for teaching and learning. 9(9.7%) of the respondents said 6 – 10 computer sets available. 11(11.8%) of the respondents said they have 11 – 15 computer sets in the department. However, 57(61.3%) of the respondents could not ascertain the actual number of computer sets available in the department therefore chose "Unknown".

This implies that the majority of the respondents do not know the exactly number of computer sets available in the department.

**Table 8: Responses based on how many sound systems are there in the department of political science for teaching and learning**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| 1 – 5 | 46 | 49.5 |
| 6 – 10 | 12 | 12.9 |
| 11 – 15 | 8 | 8.6 |
| 16 and above | - | - |
| Unknown | 27 | 29 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 8 reveals that 46(49.5%) of the respondents said there are 1 – 5 sound systems available in the department of political science for teaching and learning. 12(12.9%) of the respondents said 6 – 10 sound systems available. 8(8.6%) of the respondents said they have 11 – 15 sound

systems in the department. However, 27(29%) of the respondents could not ascertain the actual number of sound systems available in the department therefore chose "Unknown".

This implies that the majority of the respondents revealed that between one to five sound systems are available in the department.

**Table 9: Responses based on how often lecturers use computer to teach**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| Very Often | 16 | 17.2 |
| Often | 11 | 11.8 |
| Unknown | 29 | 31.2 |
| Not very often | 31 | 33.3 |
| Not often | 6 | 6.5 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 9 reveals how often lecturers use computer to teach, 16(17.2%) of the respondents said "Very Often", 11(11.8%) of the respondents said "often' and 29(31.2%) of the respondents could not ascertain it "Unknown". 31(33.3%) of the respondent said "not very often" and 6(6.5%) of the respondents said "not often.

This implies that the use of computer for teaching in the department is "not very often" as indicated by the majority of the respondents.

**Table 10: Responses based on how often times do lecturers use projector to teach**

| Items | Frequency (n=93) | Percentage (%) |
|---|---|---|
| Very Often | - | - |
| Often | 12 | 12.9 |
| Unknown | 21 | 22.6 |
| Not very often | 32 | 34.4 |
| Not often | 28 | 30.1 |
| **Total** | **93** | **100** |

**Source:** *Field Survey, June 2016.*

Table 10 reveals how often lecturers use projector to teach, no respondent said "Very Often", 12(12.9%) of the respondents said "often' and 21(22.6%) of the respondents could not ascertain it "Unknown". 32(34.4%) of the respondent said "not very often" and 28(30.1%) of the respondents said "not often.

This implies that the use of projector for teaching in the department is "not very often" as indicated by the majority of the respondents.

**RESEARCH QUESTION THREE**

**How adequate are the multimedia facilities for teaching and learning of political science?**

**Table 11: Responses on the adequacy of Instructional Multimedia facilities for teaching and learning of Political Science**

| S/N | Items | No. of respondents (Yes)(n=93) | Percentage (%) | No. of respondents (No)(n=93) | Percentage (%) |
|---|---|---|---|---|---|
| 1 | Are the computer sets adequate for teaching and learning of political science? | - | - | 93 | 100 |
| 2 | Are the sound systems adequate for teaching and learning of political science? | 6 | 6.5 | 87 | 93.5 |
| 3 | Is the use of projectors adequate for teaching and learning of political science? | - | - | 93 | 100 |
| 4 | Does the use of video promote active participation of student in the class? | 51 | 54.8 | 42 | 45.2 |
| 5 | Does the use of instructional multimedia encourage students' academic performance? | 63 | 67.7 | 30 | 32.3 |

**Source:** *Field Survey, June 2016.*

On the determining the adequacy of Instructional Multimedia facilities for teaching and learning of Political Science, Table 11 shows that 93(100%) of the respondents indicated that computer sets are not adequate in the department. 6(6.5%) of the respondents said "Yes" sound systems are adequate for use in the department while 87(93.5%) of the respondents said 'No' not adequate. It was also revealed from the table above that projectors in the department are not adequate with 93(100%) of the respondents affirming it.

The Table further revealed that the use of video promotes active participation of student in the class with 51(54.8%) of the respondents saying "Yes" while 42(45.2%) of the respondents said "No". Again, the table above revealed that the use of instructional multimedia encourages students' academic performance with 63(67.7%) of the respondents affirming it "Yes" while 30(32.3%) of the respondents said "No".

This implies that small number of instructional multimedia facilities in the department has little or no effect on students' participation in class activities and their academic performances as indicated by the majority of the respondents above.

## RESEARCH QUESTION FOUR

### What factors limit the use of multimedia by lecturers in political science?

**Table 12: Responses on the factors that limit the use of multimedia by lecturer in Political Science**

| S/N | Items | No. of respondents (Yes)(n=93) | Percentage (%) | No. of respondents (No)(n=93) | Percentage (%) |
|---|---|---|---|---|---|
| 1 | None supportive infrastructures limit the use of multimedia in teaching and learning of political science? | 71 | 76.3 | 22 | 23.7 |
| 2 | Does inadequate knowledge on the use of multimedia in teaching and learning of political science limit its usage? | 25 | 26.9 | 68 | 73.1 |
| 3 | High cost of technology limits the use of multimedia in teaching and learning of political science? | 46 | 49.5 | 47 | 50.5 |
| 4 | Does lack of understanding on the benefits of multimedia facilities limit the use of multimedia in teaching and learning of political science? | - | - | 93 | 100 |

**Source:** *Field Survey, June 2016.*

Table 12 reveals the factors that limit the use of multimedia by lecturers in political science. 71(76.3%) of the respondents said "Yes" that none supportive infrastructures limit the use of multimedia in teaching and learning of political science while 22(23.7%) of the respondents said "No". The Table above also revealed that 25(26.9%) of the respondents said "Yes" inadequate knowledge on the use of multimedia in teaching and learning of political science limit its usage while 68(73.1%) of the respondents said "No". High cost of technology limits the use of multimedia in teaching and learning of political science with 46(49.5%) of the respondents saying "Yes" and 47(50.5%) of the respondents saying "No". Table 12 further revealed that 93(100%) of the respondents disagreed that lack of understanding on the benefits of multimedia facilities limit the use of multimedia in teaching and learning of political science.

This implies that, of all factors affecting effective utilization of instructional multimedia in the department, none supportive infrastructures limit the use of multimedia in teaching and learning of political science as indicated by the majority of the respondents.

## ANALYSIS OF NULL HYPOTHESES

**Hypothesis 1:**

**$H_{O1}$: "The availability/use of instructional multimedia does not significantly influence students' academic performance".**

**Table 13: Regression Result for Instructional multimedia that influence students academic performance**

| Item | Coefficient | Standard Error | T.Statistics |
|---|---|---|---|
| (Constant) | -.024 | .020 | -1.456 |
| Cds, | .038 | .102 | .371 |
| Video | .065 | .078 | .829 |
| Computer Sets | .098 | .078 | -1.097 |
| Projector | .469 | .089 | 4.255** |
| Sound Systems | .507 | .110 | 6.122* |

**Dependent Variable: Students' Academic Performance**
R2 = .922
Adj R2 = .918
F = 253.819
(* Significant)

The analysis of data in Table 13 revealed that the multiple co-efficient R2=0.922 shows a relatively high degree of relationship between the dependent variable and the independent variables; Instructional multimedia (Cds, VCDs, Computer Sets, Projector, and Sound systems). In other words, there is a high degree of association in between the dependent variable and the independent variables taken together. The Adjusted R2 = (denoted by Adj. R2) was found out to be 0.918. This implies that 91.8% of the variation in students' performance is explained by the changes in variables in the model. The F-test is significant showing that the joint effect of variables in the model on students' performance is significant.

With regards to the effect of individual variables, it was found out that use of projectors and Sound Systems are significant factors that influence students' performance at 10% and 5% conventional level respectively. This however, appears to suggest that a change in these variables will lead to the students increase or decrease of their performance. Other variables were found out to be insignificant.

Decision: In view of the positive significant relation at 0.5% of regression estimate of sound systems and use of projectors for teaching as major factors that influence students' performance, we are inclined to reject the null hypothesis and accept the alternate hypothesis which states that; "The availability/use of instructional multimedia significantly influences students' academic performance".

**Hypothesis 2:**

**$H_{O2}$: There is no significant influence on the use of audio/visual on students' effective learning of political science.**

**Table 14: T - Test result for the use of audio/visual on students' effective learning of political science.**

| | | Paired Differences | | | | | T | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Audio/Video – Students' effective learning | .111 | 1.980 | .295 | -.484 | .706 | .377 | 44 | .000 |

Table 14 Shows that the t – test is .377 and P - .000 which is less than 0.05. Calculated value is greater than the critical table value at .44 degree of freedom and at 0.05 level of significant. This means that the null hypothesis is rejected. This implies that there is significant influence on the use of audio/visual on students' effective learning of political science.

**Hypothesis 3:**

**$H_{03}$: There is no significant influence on the use of animation on students' effective learning of political science.**

**Table 15: T - Test result for the use of animation on students' effective learning of political science.**

| | | Paired Differences | | | | | T | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Animation – Students' effective learning | .396 | .492 | .050 | -.296 | .495 | 7.377 | .95 | .000 |

Table 15 indicates that the t – test is7.377 and P - .000 which is less than 0.05. Calculated value is greater than the critical table value at .95 degree of freedom and at 0.05 level of significant. This means that the null hypothesis is rejected. This implies that there is significant influence on the use of animation on students' effective learning of political science.

**Hypothesis 4:**

**$H_{04}$: There is no significant influence on the use of limited simulation in teaching and students' academic performance.**

**Table 16: T - Test result for the use of limited simulation on students' academic performance.**

| | | Paired Differences | | | | | T | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Animation – Students' effective learning | 5.000 | 3.060 | .442 | 4.112 | 5.888 | 11.322 | .47 | .000 |

Table 16 indicates that the t – test is11.322 and P - .000 which is less than 0.05. Calculated value is greater than the critical table value at .47 degree of freedom and at 0.05 level of significant. This means that the null hypothesis is rejected. This implies that there is significant influence on the use of limited simulation on students' academic performance in political science.

## Discussion of Findings

The discussion of findings is based on the research questions earlier formulated for this study.

### Research Question 1

How available are the Instructional Multimedia for teaching and learning of Political Science?
The data from the study revealed Cds, projector, computer and sound system are available Instructional Multimedia in their respective faculties with 62(66.2%), 76(81.7%) and 69(74.2%) of the respondents affirming it respectively. This implies that the majority of the students indicated that there are Cds, projectors, computer and sound system in their department for use by the lecturers for teaching.

This is reaffirmed by the earlier studies of Onotai, Tabansi, Asuquo, (2012) that concluded that lecturers in most Higher Institutions use projectors, computer and sound system for most of their teachings on campus and these tend to enhance students' learning performance.

### Research Question 2

**The pattern and frequency of use of multimedia for teaching and learning by lecturers in the political science?**

The study above revealed that the majority of the respondents do not know the exact number of computer sets available in the department. It was also revealed that between one to five sound systems are available in their department. And the use of computer for teaching in the department is "not very often", same with projector as indicated by the majority of the respondents.

The study of Onotai, Tabansi, Asuquo, (2012) on Medical student's perception of traditional method and multimedia use for lecture delivery at the University of Port Harcourt, Nigeria reaffirmed the study above which concluded that the traditional method (dictating of lecture notes) was the dominant method of lecture delivery in the clinical medical students lecture series of the College of Health Sciences of University of Port Harcourt but other methods such as use of sound system, and projectors are also used in the higher institutions to enhance learning.

### Research Question 3

**How adequate are the multimedia facilities for teaching and learning of political science?**

On the determining the adequacy of Instructional Multimedia facilities for teaching and learning of Political Science, the study above revealed that computer sets, sound systems, and use of simulation and projectors are not adequate in the department. This implies that small number of instructional multimedia facilities in the department has little or no effect on students' participation in class activities and their academic performances as indicated by the majority of the respondents above.

A study by Danebeth (2013) on the effect of multi-media instruction on student learning reaffirmed short of instructional facilities affects the learning process of the students but however confirmed that there is a significant effect on the academic performance of the experimental group in which the multi-media instruction had been employed. Thereby, students who had multi-media instruction executed better learning than students who were taught in the traditional teaching method.

**Research Question 4**

**What factors limit the use of multimedia by lecturers in political science?**

There are some factors that limit the use of multimedia by lecturer in political science as indicated in the study above. The factors that limit the use of multimedia by lecturers in political science include none supportive, inadequate knowledge on the use of multimedia in teaching and learning of political science and lack of understanding on the benefits of multimedia facilities limit the use of multimedia in teaching and learning of political science.

The above result is reaffirmed by the study carried out by Nasaruddin and Ismayatim (2013) on Factors Affecting the usage of Multimedia Teaching Tools by university lecturers and however, concluded that factors that affect the usage of multimedia tools in schools are many which include the design and technical functionality of the software itself, High cost of technology, Lack of supportive infrastructures, and wrong choice of software or software inadequacy.

## Conclusion

There is little doubt that the changing role of education is currently being reinforced with the integration of multimedia technologies. This has led to a new paradigm in education and the evolution of new concepts in content development and a number of innovative methods in which information can be communicated to the learners. This new learning environment will undoubtedly influence the way teachers teach and students learn.

This research has presented and discussed the use of multimedia in a learning environment to equip students with high-order thinking and problem-solving skills and to enable them to experience an ICT-oriented learning situation. From the results, we are able to conclude that by integrating multimedia into the teaching and learning process, the conventional traditional method is reinforced and strengthened and a multimedia-oriented method can be instituted. The multimedia project in this course enabled the students to exercise their creative and critical thinking skills in solving their design and development problems, work collaboratively to gain team-based experience, and to face the real-life situation of problem-solving. This is a student-centered learning approach which allows them to construct their own knowledge and understanding, and determine their own learning goals. The role of the teacher, on the other hand, changes from the "sage on the stage" to a "guide on the side," assisting the students in the construction of their knowledge.

As such, the use of multimedia technology and project are an innovative and effective teaching and learning strategy because they motivate the students in their learning process and help them to acquire good problem-solving skills. As evidenced by this project, students became very active participants in their learning process instead being passive learners, and were able to use various digital media elements to accomplish their project.

## Recommendations

In view of the above findings, the researchers would like to recommend as follows that:
i. The Nigerian (Federal) government should see Information and Communication Technology (ICT) integration effort at the university as an embracing project to development in education and should support by allocating and releasing adequate funds to invest in massive Internet connectivity, as well as purchase and installation of ICT infrastructures. Also, the university must aim to ensure accessibility, availability and reliability of ICT facilities such that every lecture room and staff offices have computers linked to Internet and have equipment appropriate for accessing a range of electronic resources.
ii. If the Federal Government is not forthcoming, the university management can solicit for both internal and external funds and support from willing individuals, philanthropists and international organizations. They can also embark on networking and partnership programs for funds, technical support etc but should ensure that funds or support realized are geared toward sustainability of ICT integration and application efforts.
iii. The Federal Government can also help by subsiding or reducing the tariffs on importation of ICT facilities so that lecturers and others can afford the purchase of these ICT facilities and accessories since the price will be lower.
iv. It is also recommended that the University lecturers be exposed to a series of training and development skills in the use of these high technology facilities. Integrating the use of technology into curriculum in a purposeful and meaningful way is one of the many problems facing lecturers today. ICT training should be given to lecturers and other members of staff in the university on integration of technology in instruction.
v. Adequate, competent and experienced ICT technical staff must be made available should problems arise.

## References

Danebeth, T.G (2013). The effect of multi-media instruction on student learning. *Journal of Education and Practice*, Vol.4, No.5.

Doolittle (2001). What drives successful technology planning? *Journal of Information Technology for Instructor Education*, 5(1/2), 46.

Hede & Hede. (2002). *Media, communication and national development*. Uppsala: Scandinavian Institute of African Studies. pp. 218 – 223.

Jonassen, (2000). *Academic library as a learning environment: how do students perceive it?* A paper presented at the European Conference on Educational Research. University of Hamburg pp. 17 – 20.

Lindstrom, R. (2004). *The Business Week Guide to Multimedia Presentations: Create Dynamic Presentations That Inspire*. New York: McGraw-Hill.

Maddux, Johnson & Wills (2005). Towards developing a profile of ICT use among IPBA lecturers. *Jurnal IPBA, Jilid*3: Bil 3. Available online at http://apps.emoe.gov.my/ipba/rdipba/cd1/article92.pdf. Accessed on 7th March, 2009.

Nasaruddin F.H , & Ismayatim W.F (2013). *Factors Affecting the usage of Multimedia Teaching Tools by University Lecturers*. 4th International Conference on Computer Science and Information Technology (ICCSIT'2013) Oct. 6-7, 2013 Dubai (UAE).

Neo, M & Neo, T. K. (2000). *Multimedia Learning: Using multimedia as a platform for instruction and learning in higher education*. Proceedings of the Multimedia University International Symposium on Information and Communication Technologies 2000 (M2USIC'2000), PJ Hilton, October 5-6, 2000, pp S3-1.1 - 1.4.

Ng, K. H. & Komiya, R. (2000). *Introduction of Intelligent Interface to Virtual Learning Environment*. Paper presented at the Multimedia University International Symposium on Information and Communication Technologies 2000 (M2USIC'2000), October 5-6, Petaling Jaya, Malaysia.

Nwagbo, C. (2008). Science, Technology and mathematics curriculum development: Focus on problems and prospects of political science curriculum delivery; 49th Annual conference of science teachers' association of Nigeria (STAN) pp. 77-81.

Omagbemi, C.O., Akinola, B.A. & Olayiwola I.B. (2004). Academic libraries, the Internet and it's potential impact on teaching and learning in Nigerian tertiary institutions. Journal of Library and Information Science, Vol. 1 (1 & 2), pp. 34-46.

Onotai L. O., Tabansi, P. N. & Asuquo, E. O. (2012), Medical student's perception of traditional method and multimedia use for lecture delivery at the University of Port Harcourt, Nigeria. *International Educational Research journal,* Vol. 3(7) pp. 576-582.

Oshodi, O. (2000). *Introduction to instructional media*. Lagos: Amazing Grace Press.

Roblyer, M.D. & Edwards, J. (2008). *Integrating Educational Technology into Teaching* (second edition). New Jersey: Merrill/Prentice-Hall.

Schwartz, J. & Beichner, R. (2000). The use of ICTs for teaching and learning in Law Education: some innovators' perspectives. Web Journal of Current Legal Issues, (Web JCLI), Issue 3. Available online at http://webjcli.ncl.ac.uk/2006/issue3/enyon3.html. Accessed on 22nd January, 2009.

Teo, R. & Wong, A. (2000). Does Problem Based Learning Create A Better Student: A Refelection? Paper presented at the 2nd Asia Pacific Conference on Problem –Based Learning: Education Across Disciplines, December 4-7, 2000, Singapore.

Tapscott, D. (2008). Growing Up Digital: The Rise of the Net Generation. New York: McGraw-Hill.

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