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UTILIZATION OF POWER POINT INSTRUCTIONAL PACKAGE AND ACADEMIC PERFORMANCE OF SSII AGRICULTURAL SCIENCE STUDENTS IN UKANAFUN LOCAL GOVERNMENT AREA OF AKWA IBOM STATE – NIGERIA

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Abstract

The study was on the use of Power Point Instructional Package on Academic Performance of SS II Agricultural Science students in Ukanafun Local Government Area of Akwa Ibom State. To undertake the study, two research questions and two research hypotheses were formulated to guide the study. The quasi experimental design was used to select 90 out of 1621 senior secondary two students for experimental and control. The package for experimentation was developed using the systematic principles and the analysis design and evaluation model that detailed what should be done in the design process. The experimental group was treated to the use of power-point instructional media while the control group was taught using expository strategy. After the exercise, the learners were exposed to Agricultural Science Performance Test (APT) that was validated by experts with reliability co-efficient of .86. The scripts were collected and analysed using mean, standard deviation and t-test statistics. The analysis shows that there was a significant difference in academic performance of students taught using power-point instructional package and those taught without. There was also no significant difference in academic performance of male and female Agricultural science students taught using power-point instructional package. Based on these findings, it was recommended that power-point instructional package be integrated in instructional presentations in schools. Also, power-point instructional packages should be used in all schools, irrespective of gender among other recommendations.

***Keywords*:** Power-point instructional Package, Students' Academic Performance, Power-point Utilization

1. Introduction

Power point is a programme that helps the user to prepare a presentation. It can present information in diverse forms and formats. Gupta (2010) states that Microsoft powerpoint presentation includes texts, graphics and animations. Power point gives you four screen layouts for constructing instructional presentations in addition to the slides show. Its uses include integrated presentations. The most popular uses of power point presentation, in recent and modern days, include sales gathering, corporate training sessions, business and marketing, meeting and learning.

Power point supports cooperation training and effect retention among learners (Challorier, 2002) Power Point presentation is a medium that creates a link between two and more minds, to transmit the encoded intents feelings, emotions, information, skills, values or knowledge to the other mind(s). Power point projected signals affect learner's mind muscle and stimulates it for an observable, measurable impact. In performing this function, power point presentation plays the traditional role of media in the teaching–learning process (Udoh, 2007). It performs

the function of educational media as a vehicle carrying the stimulus mode to be presented to students. It is an information medium employed in instruction. Power point is one of the digital media recruited and utilized for learning. It satisfies learning needs of users or learners by facilitating instruction and having a motivating impact on students.
Information presentation in power point is capable of ensuring learners visual literacy. Learners can interpret and discriminate visually. The learning impact of power point on learners is not discriminatory among users (Grupta, 2010). Information presentation combines the expression quality of graphics, (pictures, graphics, drawing, posters and cartoon) text and animation which are capable of increasing the learning gains of students in school subjects (Ekong, 2006).

Power point presentations create better interaction, more effective and transactional instructional situation that is likely to improve students' performance in school subjects. Power point presentation has been identified as effective and efficient instructional media capable of increasing the learning gains of students for consequence increase in students performance in many subjects areas, Ekpo (2003) Mandu and Ezean (2010). This claim has not been ascertained by practical use of power point presentation in the teaching of agricultural science in schools in Ukanafun Local Government Area. This is predicated on the fact that students' performance in Agricultural Science during external examinations continues to dwindle as reported by Akpabio and Ebong (2009).

One cannot exactly tell whether this poor result can be caused by poor method of teaching by the teachers or students poor study habits, or can students be motivated to learn using power point presentations or can power point instructional package enhance academic performance of agricultural science students in internal or external examination in Ukanafun local Government Area, Akwa Ibom State – Nigeria.

2. Research Questions

To undertake this study, two research questions and two research hypotheses were formulated to guide the study.

1. What is the difference in the academic performance of students taught using power point presentation and those taught without power point presentation?
2. What is the difference in the academic performance of male and female students taught Agricultural Science using power point presentation?

2.1 Hypothesis

1. There is no significant difference in the academic performance of SSII students taught using power point presentation and those taught without power point presentation.
2. There is no significant different in the academic performance of male and female students taught agricultural science using power point presentation. The study was conducted in Ukanafun Local Government Area, in Akwa Ibom State, Nigeria. It is one of the 31 Local Government Areas in Akwa Ibom State with nine (9) public secondary schools. Ukanafun Local Government Area is bounded in the North by Etim Ekpo Local Government Area, in the South by Oruk Anam, in the East by Abak and in the West by River State of Nigeria. The people in the Local Government Area engage themselves in active farming. They are very industrious and productive. They engage themselves primarily in root crop cultivation. The study was carried out using SSII agricultural science students. The learners are predominantly rural dwellers of boys and

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girls approximately of 15 – 19 years of age who are highly engaged in subsistence farming and they love to study agriculture as science subject in the schools.

3.Methods

The quasi-experimental with static group comparison design was adopted for this study. The groups are said to be static because the design lacks a pretest. It is suitable for this study because the researcher wants to compare the performance of SSII agricultural science students taught using power point treatment with the performance of students in another independent group that has not been exposed to such treatment.

The population for the study consisted of all the 1621 students in all the 9 public secondary schools in Ukanafun Local Government Area.

The sample of this study was 90 SSII students consisting of 48 male and 42 female students in 2 intact classes in a school that was selected using simple random techniques of hat and draw method. All the 9 public secondary schools in Ukanafun Local Government Area were enlisted separately folded and mixed in a tray and a school was drawn at random. Two intact classes in the school drawn were selected using the same method. The two intact classes formed the experimental and the control group and the 90 students used for this study represent 56% of the study population.

The instrument was; therefore, regarded as reliable and used for the study. The researcher personally went to the selected schools and took permission from the school authority and the two teachers whose classrooms and students formed the experimental and the control groups. The experiment was set up ready for the test. The students were seated; the teacher introduced himself and the mission. The lesson on soil silicate clay minerals was presented and guided by the researcher and the researcher's assistants trained for the exercise.
A researcher developed instrument, called Agricultural Science Performance Test (APT) was used to elicit information on students performances. A lesson package was developed using power point instructional Presentation on soil silicate clay minerals. The lesson was prepared and taught using the systematic principles and the ADDIE instructional model of (2003) and used in the treatment of the experimental group while the control group was taught using expository method.

To gain the reliability co-efficient, 15 students who did not take part in the study were served with the instrument. Their scores were analysed using Pearson Product Moment Correlation Coefficient. A correlation coefficient of .86 was recorded. This was further converted using Spearman Brown prophetic formula to have reliability co-efficient of .79. The instrument was therefore regarded as reliable and used for the study.

APT was administered to the students and the answer sheets collected. The same lesson was presented to the control group, but without using power point package. The test was administered and the answer sheets of the two groups were collected after the administration of the test instruments. Data collected from the experimental and the control groups were used for analysis. Data collected from the SSII students were analyzed using descriptive statistics of mean and standard deviation while the inferential statistics of independent t-test was used in testing the postulated hypotheses.

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4. RESULTS AND DISCUSSIONS OF FINDINGS
ANSWERING OF RESEARCH QUESTIONS:

Research Question I: What is the difference in the academic performance of agricultural science students taught using power point package and those taught without using power point package?

The result is as seen in table I:

TABLE I: Mean score analysis on use of power pint presentation on academic performance of students:

VARIABLES	N	X	SD
Taught using power point package	45	67.33	1.69
Taught without power point package	45	51.86	1.64

Table I showed the mean score of 67.33 and standard deviation (1.69) of students taught agricultural science using power point instructional package is greater and different from the mean score of (51.89) and standard deviation of (1.64) for students taught without power point instructional packages.

Research question 2: What is the difference in the performance of the male and female SSII students taught Agricultural science using power point instructional package?
The result is as presented in Table II
Table II mean score analysis on use of power point instructional package on academic performance of male and female SSII students in Agricultural Science.

VARIABLE	N	X	SD
Male students taught using power point Instructional package	24	52.92	1.64
Female students taught using power point Instructional package	21	51.25	1.63

An examination of table II indicated that the mean score of 52.92 and standard deviation 1.64 for male students is greater than the female mean score of 51.25 and standard deviation of 1.63. This shows slight difference in academic performance between male and female Agricultural sciences students taught using power point presentation instructional package.

TESTING OF HYPOTHESES

Hypothesis I: There is no significant difference in the academic performance of SSII students taught using power point instructional package and those taught without power point presentation.

This analysis is shown on table 3

Table 3: t-test analysis on use of power point instructional package presentation in agricultural science and students academic performance.

VARIABLES	N	X	SD	DF	T-CAL	T-CRIT
Students taught using						

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Power point package	45	67.33	1.69	88	44.11*	1.98
Students taught without Using power point package	45	51.89	1.64			

* Significant at .05

An examination of table 3 indicates that the t-Test value of 44.11 is greater than the critical value of 1.98 at 0.5 level of significance and degree of freedom 88. The null hypothesis is rejected. This implies that there is a significant difference in academic performance of Agricultural Science students taught using power point instructional presentation and those taught without.

Hypothesis 2: There is no significant difference in academic performance of male and female students taught Agricultural science using Power-Point package. The analysis is as shown on Table 4.

Table 4 t-test analysis on academic performance of male and female SSII students taught agricultural science using power point presentation.

VARIABLES	**N_1**	**$\underline{X}$**	**SD**	**DF**	**T-CAL**	**T-CRIT**
Male SS2students taught Agricultural science using Power point presentation	24	52.92	1.64	4.3	3.42	2.01
Female Agricultural Science SSII Students taught using power point Instructional presentation	21	51.25	1.63			

Table 4: Indicates that the calculated t-value of .342is less than the critical t-value of .3.01 at degree of freedom 43 and .05 level of significance. The null hypothesis is upheld. This means that there is no significant difference in the academic performance of SSII power point presentation and therefore gender did not significantly influence academic performance of students taught using power point instructional presentation.

5. Discussion of Findings

Data analysis indicated a significant influence of power point instructional package on Academic performance of SSII Agricultural Science students in schools in Ukanafun Local Government Area of Akwa Ibom State. The reason for this result is obvious. Power point instructional presentation combines the expressive quality of graphics, texts and animations. They positively engage the sense organs of the students and attract their attention for learning. This finding is supported by Ekong (2006), who submitted that the use of power point instructional packages motivates the learners to learn and also is capable of increasing the learning gains of students in school subjects. The engagements of these students with graphical developed animated materials become the source of the significant difference in academic performance between the experimental and the control groups of students.

Equally, the study showed no significant difference in academic performance of male and female students taught using power point instructional presentation. The reason for this result is that both male and female students have equal opportunity of learning fast when power point instructional delivery was adopted. This finding is supported by Grupta (2010), who asserted that the learning impact of power point instructional presentation is not users discriminatory. This user friendly nature of power point packages is traceable to the fact that both male and female students more positively affected when animated chips of power point were presented to them.

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Conclusion

This study concludes that the use of power point instructional package significantly affects the academic performance of both male and female students in Agricultural Science lessons. The constant use of power point instructional packages and Presentation are not discriminatory in engagement of the learners to have learning gains irrespective of students' gender.

Recommendations

The following recommendations are put forward to enhance the teaching of Agricultural Science:

1. Power point instructional delivery should be introduced in all schools to facilitate learning and improve students' academic performance.
2. Stakeholders should provide power point facilities for use in Agricultural Science lesson and in many subject areas.
3. Teachers should be taught the development of Power Point instructional packages to promote teaching and learning and subsequently academic performance of students.
4. School supervisors should ensure that teachers make use of power point and other ICT facilities in the teaching of students in various subject areas including Agricultural science.

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