

Undergraduate Science Students Perception and Attitude towards the Use of Power Point in Science Lecture Delivery in Nnamdi Azikiwe University, Awka, Nigeria

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Abstract: *This study was geared towards undergraduate science student perception and attitude of power point in science lecture delivery in Nnamdi Azikiwe University, Awka, Anambra State. The population of the study comprises 400 level science students with a total no of 675 science students from the nine (9) departments in faculty of Bio-sciences Education of Nnamdi Azikiwe University. Three research questions and one hypothesis guided the study. The instrument for data collection was structured questionnaire which was made up of five (5) point rating scale. The questionnaire was made up of 20 items. The research topics, purposes, question and hypothesis were validated by 3 experts in the Faculty of Bio-sciences Education of Nnamdi Azikiwe University Awka. For the analysis a mean of 3.0 and above was adapted as a cut of mark for the acceptance of items, the data collected was analyzed using mean, standard deviation and z-test. The result of the analyses shows that science students in Nnamdi Azikiwe University has a positive attitude that when power point is used affectively in science lectures it makes them participate more actively. There is no significant difference between male and female undergraduate science student perception of power point. Based on the findings of the study, conclusions were drawn and recommendations were made on how to better the above mentioned problems.*

Keywords: Perception, attitude, power point, lecture delivery

1. Introduction

There is an enormous use of Information Communication Technology (ICT) in all spheres of human endeavour which is playing very significant role in nation's development. The rapidly growing impact of ICT has brought about a revolutionary change in every facet of human life. Ezeobi (2016) stated that the use ICT in the education is also unprecedented in recent times and it pervades all levels of education especially at the tertiary level. Higher learning institutions are increasingly orienting themselves to the use of ICT as means of delivery subject matter content (Ezeobi, 2016). Osisioma (2012) highlight the possibilities offered by ICT and the turning point they represent for traditional learning environment, giving rise to virtual learning.

Too often we forget how significantly teaching practice shape learning experience and power point is a perfect example. Power point has redefined "what a lecture looks like, consist of and how it is experienced". Onah and Obi (2016) stated that power point is a presentation program developed by Microsoft. It is included in the standard office suit along with Microsoft word and excel. The software allows user to create anything from basic slide shows to complete presentations. The presentations are comprised of slides, which may contain text, image and other media, such as audio clips and movies, the most of power points are created from a template, which include background colours or images, a standard font and a choice of several slide layouts. When presenting a power point presentation, the presenter or teacher may choose to have the

slides change present intervals or may decide to control the flow manually. This can be done using the mouse, keyboard or a remote control. Power point in lecture delivery allows teacher to present their lesson in a more dynamic way than lecturing and writing in the board.

Attitude could be defined as a favourable or unfavourable tendency of individual towards an entity based on the evaluation of this entity by the individual. Ramanair and Uyo (2008) stated that attitude has three components which are cognitive, affective and behavioural. It is obvious, that attitude is a multi-dimensional in itself.

Behaviours are affected by one's socio-cultural environment and emotions. The affective component of attitude consists of emotions or feelings about object include likes or dislikes, preference or rejections. The cognitive component involves individual's ideas, thoughts, perceptions, beliefs, opinion, or mental conceptions of an object or a person while the behavioural component concerns a person's behavior directed to an object or a person. All the three components of attitude interact with each other (Ramanair & Ugo, 2008). Undergraduate science students' attitude towards the use of power point in science lecture delivery, whether positive or negative, affects how they respond to and use ICT. Therefore, information is required about science students' attitudes for plans about future investments in ICT.

There is a general perception, that the condition prevailing in a learning environment can influence ones educational development. The use of computer in the classroom has been

found to develop student's ability to learning independently, analyze information, think critically and solve problems (Menjo, 2012). Hornby (2007) stated that perception is equated with reality for most practically purpose and guides human behavior in general.

Science students' gender is also important factor to consider in the perception and attitude towards the use of power point in science lectures delivery in Nnamdi Azikiwe University, Awka. Okebukola (2004) stated that gender balance has been always considered a critical issue of the contemporary society. Gender disparities exist in the integration at ICT into teaching and learning. There are more male than female science teacher in ICT knowledge and attitude of science teachers (Okebukola, 2004).

2. Statement of the Problem

It has been discovered in recent years that lecture method of teaching is one way sided where students have less opportunity to contribute their own personal opinions or protest the information being delivered sometimes the student will even be forced to agree with the lecturer if they want a passing grade (Ukaegbu & Nwagbo, 2016). The Federal Republic of Nigeria (2009) was of the view, that, not only do people see the lecture method as a based, one-way road, but they also, see it as a wholly passive experience for student. Teachers find it hard to relate the topics to students and as well explain it in details within the small allotted time for the course, this is where the use of power point in lecture method of delivery comes into play. Power point creates room for students to view and listen at the same time, where the fundamental point will be listed on the slide and it will establish a guide and motivating factor to the teacher and students respectively, hence the need for this study.

3. Purpose of the Study

The main purpose of the study is to investment the undergraduate science student perception and attitude towards the use of PowerPoint in science lecture delivery in Nnamdi Azikiwe University, Awka. Specifically, the study sought to:

- 1) Find out the perception of undergraduate science towards the use of power student towards the use of PowerPoint in science lecture delivery.
- 2) Find out the attitude of undergraduate science student towards the use of Power Point in science lecture delivery.
- 3) Find out the different between male and female undergraduate science student perception in science lecture delivery.

Research Questions and Hypothesis

The study was guided by three research questions and one hypothesis:

Research Questions

- 1) What are the perceptions of undergraduate science students towards the use of power point in science lecture delivery?

- 2) What are the attitudes of undergraduate science students towards the use power point in science lecture delivery?
- 3) What are the differences between male and female undergraduate science students' perception towards the use of power point in science lecture delivery?

Hypothesis

There is no significant difference between male and female undergraduate science student perception towards the use of power point in science lecture delivery.

Methodology

The design of the study is descriptive survey design. Nworgu (2015) in line with Akuezulo and Agu (2007) described the survey research as one in which a group of people or item is studied by collecting and analyzing data from only a few people or item considered to be representative of the entire group. The design was adopted because information gathered from the particular were made in their natural and normal school environment and also analysed without any form of treatment.

The population of the study comprises of 67 undergraduate science students from the nine (9) departments in Nnamdi Azikiwe University, Awka.

Table 1: Population Distribution by Departmental Subjects

S/N	Department	No. F Science Student
1	Science Education	114
2	Vocational & Technical Science Education	197
3	Botany	29
4	Zoology	24
5	Human kinetic & Health Science Education	40
6	Library & Information Science Education	39
7	Applied Biochemistry	110
8	Applied Microbiology & Brewing	99
9	Health Science & Technology	43
	Total	675

Source: Statistic & Academic Planning Unit Nnamdi Azikiwe University, Awka (2017).

Sample Sampling Techniques

The sample was made up of 110 science students randomly drown from the nine (9) departments in the faculty of Bio Sciences Education in Nnamdi Azikiwe University, Awka, Anambra State. Simple random sampling technique (balloting with replacement) was used to select five departments. Then proportionate stratified random sampling was used to select twenty (20) percent of students from each selected department.

Table 2: The Sample Distribution for the Study

S/N	Department	No. of Science Students
1	Applied Biology & Brewing	19
2	Applied Bio Chemistry	22
3	Vocational & Technical	39
4	Science Education	22
5	Health Science & Technology	8
	Total	110

The instrument used for the study was structured questionnaire. The questionnaire has five-point Likert type of scale in which the science students indicates their degree of agreement and disagreement on the items about power point. The researcher with the aid of two research assistants administered the instrument to the respondents and collection them on the spot.

Method of Data Analysis

The findings of the study were analyzed using tallying, frequency distribution, mean, standard deviation and z-test. For the research hypothesis, z-test was used to analyzed the data because the sample size of the study was above 30. The likert type rating scale was used, which have five (5) response categories as follows: strongly agreed (SA): 5 point, agreed (A): 4 point, undecided (U): 3 point, Disagreed (D): 2 point and Strongly Disagreed (SD): 1 point. The formula for finding the mean values is given as:

$$\bar{X} = \frac{\sum fx}{\sum f} = \frac{5+4+3+2+1}{5} = \frac{15}{5} = 3.00$$

Decision Rule

The weighted mean of 3.00 stands as a critical value upon which acceptance and rejection of the responses are determined. Any response that has a value of 3.00 and above is accepted while any value that falls below 3.00 shows rejection of the statement by the respondents.

4. Results

Research Question 1

What are the perceptions of undergraduate science students towards the use of power point in science lecture delivery?

Table 3: Mean Response of Undergraduate Science Students on their Perception Towards the Use of Powerpoint in Nnamdi Azikiwe University, Awka

S/N	ITEMS	SA	A	U	D	SD	N	\bar{X}	Decision
1	I Perceived that the use of power point in lecture hall is innovative.	50	42	2	13	3	110	4.12	Agreed
2	I perceived that when power point s used to deliver lecture it bridges the gap between abstract and concrete.	15	14	19	21	10	110	3.31	Agreed
3	I perceived that when lecturers use power point in their lectures, it brings more clarity.	40	55	1	12	2	110	4.08	Agreed
4	I am passionate that using power point is better than chalk board.	8	35	5	42	20	110	2.72	Disagreed
5	I perceived that power point help present the lecture in a well organized way.	65	33	3	7	2	110	4.38	Agreed
6	I perceived power point is boring in lecture delivery.	12	8	4	54	32	110	2.2	Disagreed
7	I perceived power point is better than the use of static objects like text books and charts	33	25	14	26	10	110	3.45	Agreed
8	I perceived using power point is a waste of time in setting up the equipments	5	50	9	25	21	110	2.94	Disagreed
	Total							3.40	

Data in table 3 shows the mean rating of the science students' perception towards the use of power point in lecture delivery. All the items except items 4, 6 and 8 were rated above the criterion mean of 3.00. The items attracted positive responses of 3.31 and above, while 4, 6 and 8 attracted negative response of 2.72, 2.22 and 2.94 respectively.

Research Question 2

What are the attributes of undergraduate science students towards the use of power point in science lecture delivery?

Table 4: Mean Response of Science Students on their Attitude towards the Use of Power point in Lecture Delivery

S/N	Items	SA	A	U	D	SD	N	\bar{X}	Decision
9	Power point help me to concentrate during lectures.	22	47	9	14	18	110	3.37	Agreed
10	I feel loss of interaction when power point is used in lectures.	14	39	2	25	30	110	2.84	disagreed
11	I enjoy looking at the graph, pictures and images presented by power point.	39	51	11	7	2	110	4.07	Agreed
12	Sometimes I get carried away by the graphics being displayed on the screen.	25	39	7	32	7	110	3.72	Agreed
13	I find it hard to jot and listen at the same time in lectures that use power point.	20	35	16	19	20	110	3.15	Agreed
14	I do not have confidence when attending lecture with power point.	10	15	7	48	30	110	2.34	Disagreed
15	I have more chance to participate when power point is use in lectures.	32	50	5	18	5	110	3.78	Agreed
16	I cannot get good grade in lectures that use power point.	14	2	5	42	47	110	2.04	Disagreed
	Total							3.16	

Data in table 4 shows the mean rating of the attitude of students towards power point. All the items were rated above the criterion of 3.00 except item 10, 14 and 16 which have negative responses of 2.84, 2.34 and 2.04 respectively.

Research Question 3

What are the differences between male and female undergraduate science students perception towards the use of power point in science lecture delivery?

Table 5: Mean responses of male and female undergraduate science students' perception towards power point in science lecture delivery

S/N	ITEMS	SA	A	U	D	SD	N	\bar{X}	Decision
17	Male students participate more than female students in lectures that use power point.	25	36	51	90	35	110	2.15	Disagreed
18	Male students feels excited when power point is used in lectures than female students.	51	25	14	13	7	110	3.91	Agreed
19	Female students perceived power point as boring than male students.	8	25	5	42	30	110	2.45	Disagreed
20	Female student participate actively more than male students when power point include questions, exercise, assignment etc.	35	49	4	12	10	110	3.79	Agreed
Total						3.07			

Data in table 5 shows the mean response of male and female undergraduate students. The respondent disagreed that male student participate more than female students but agreed that male students are more excited when power point is used in lectures than female students with a mean response of 3.91.

Null Hypothesis

There is no significant difference between male and female undergraduate science student perception towards the use of power point in science lecture delivery.

Table 6: Z-Test Compassion between Male and Female Undergraduate Science Student Perception Towards Powerpoint in Science Lecturer Delivery

Gender	N	\bar{X}	SD	DF	Z-cal	Z-crit	P>0.05	Decision
Male	32	3.10	4.95	108	0.039	1.960	0.05	Accepted
Female	78	3.05	8.12					

Data in table 6 shows that at 0.05 level of significant and 108 degree of freedom, calculated value of Z (0.039) is less than critical value of Z (1.960). The null hypothesis of no significant difference is therefore upheld. The result shows that male undergraduate science students do not differ significantly in their perception towards power point from their female counter parts.

5. Discussion of Result

Based on the result of the study, the researcher found out that undergraduate science students have a positive perception towards power point. The result is consistent with the opinions of Onah and Obi (2016), they said that a larger number of students perceived that power point has a positive effect on lectures and students preferred power point to traditional lectures. Science students perceived that power point help present the lecture in a well organized way as 84% of the respondent strongly perceived that power point is innovative. The findings of the study revealed that the attitudes of students are generally positive towards power point. This agrees with Ezeobi (2016) when she stated that student preferred power point presentation over traditional method of lecture delivery and had positive attitude towards power point. With a mean of 3.78 the undergraduate science students agreed that power point increased the rate of their participation in lectures, this therefore agrees with Osisioma (2012) when she stated that 70% of the students stand the chance to participation more when power point is used in lectures.

The findings of the study also revealed that there is no significant difference between male and female undergraduate science student's perception towards power point. These indicate that gender is not a barrier to power point in lecture delivery (Okeke, 2007).

6. Conclusion

As revealed by the study, student has positive attitude and perception that when power point is used effectively in lectures, it increases their rate of participation than before. This implies that lecturers should make use of power point in order to captivate student interest and also improve learning process.

7. Educational Implications of the Study

It is evident from the study, at, power point encourage the students to concentrate and participate more during lectures, therefore, if lecturers fails to use power point in lectures, student's concentration and motivation will be low.

8. Recommendations

Based on the findings of the study, the following recommendations were made:

- 1) The tertiary curriculum planner should put into consideration the findings of this study and use it as a tool for curriculum design and evaluation. This will help to improve the teaching methods in other to attain the stated educational goal.
- 2) Educational broad should encourage lecturers to use power point while lecturing to enhance student participation.
- 3) The government should provide computer projector and electricity to encourage the use of power point and improve educational standard in higher institutions.
- 4) Monitoring team should be set up to obtain feedback from lecturers and students on the effect of power point presentations to learning.
- 5) Workshops, seminars, conferences and in-service training on the use of power point in lecture delivery for science lecturers in Nnamdi Azikiwe University, Awka Anambra State to enable them improve on their ICT skills.

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