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RESEARCH ARTICLE

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## UNDERGRADUATE STUDENTS' PERCEPTION AND ATTITUDE TOWARD THE USE OF POWERPOINT FOR LECTURE DELIVERY IN TERTIARY INSTITUTION

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### Abstract

Effective teaching and learning, especially in the 21<sup>st</sup> century, is pivoted on a deliberate and appropriate integration of technology in the classroom. Based on the preceding, undergraduate students' perceptions and attitudes toward using PowerPoint for lecture delivery in tertiary institutions were examined. The study's main objective was to determine students' perceptions and attitudes toward using PowerPoint for lecture delivery in tertiary institutions. Two research questions and one hypothesis guided the study. The study's population comprised 675 undergraduate final-year students from nine departments of the Faculty of Education at Nnamdi Azikiwe University, Awka. The instrument for data collection was a structured 14-item questionnaire with sampled respondents of 110 (32 male and 78 female) students. Mean, percentage and Z-test were used as statistical tools for the analysis. The findings of the study reveal that undergraduate students in tertiary institutions have a positive attitude and perception toward the use of PowerPoint in lecture delivery. Also, the findings show no significant difference between male and female undergraduate students' perceptions of PowerPoint usage.

**Keywords:** *Undergraduate Students, Perception and Attitude, PowerPoint Lecture delivery*

### Introduction

Science, unlike any other discipline, is driven by practice and technology. Science and technology is the key to the progress of any nation (Nwune et al., 2021). It is regarded as the critical engine that drives the economy of nations, including the field of education. The dire need for functional and productive individuals in society has placed an enormous expectation on education. Education is the only recognized institution bequeathed the responsibility for conscious character and personality formation through training. Science and technology integration in education is vital in training individuals to become productive in society. To this end, an ideal classroom setting for teaching and learning is challenged to explore, consider and adopt possible means to foster effective classroom communication and lecture delivery, including electronic media (Onivehu & Ohawuiro, 2018). The role of electronic media in teaching and learning all over the world is quite influential. As one of the factors that influence effective teaching and learning, electronic media can stimulate students to

participate actively in the classroom (Ristyani et al., 2020). The use of electronic instructional media enhances teaching and learning by complementing conventional approaches to teaching.

Classroom instruction is considered successful if it bridges the gap between students' knowledge and the learning outcome of the course. Bridging this gap requires classroom teachers to adopt any available means, including instructional media integration in the classroom. Dewi et al. (2021) posited that using instructional media aids students' knowledge retention, motivates interest in the subject matter, and illustrates the relevance of many concepts. They further stressed that using media is crucial when teaching is expected to achieve better results or higher learning achievement. That is to say that technology's influence is all-encompassing.

One of the significant agents of influence in our contemporary society is technology. Technology affects the present-day learning environment in terms of supplying digital stimuli and changes in students' perceptions and thinking processes, which in turn impacts how they learn (Ozaslan & Maden, 2013). If technology has such influence and reach, it means it has come to stay. Therefore, it should be explored and applied appropriately in teaching and learning, especially PowerPoint.

The global presence of electronic media needs to be maximized. PowerPoint presentation is one of the most popular technological tools in education. Few studies on this tool as a medium of instruction were centred on students and teachers in secondary schools and few on tertiary institutions. Few of this literature is rather too old and were conducted outside the location of the present study. Thus, the problem of the study is to determine the perceptions and attitudes of undergraduate students regarding the use of PowerPoint in lecture delivery at Nnamdi Azikiwe University Awka. The study also determined if there is any significant difference in male and female students' perceptions and attitudes toward using PowerPoint.

The study's main purpose is to investigate undergraduate students' perceptions and attitudes toward the use of PowerPoint in lecture delivery at Nnamdi Azikiwe University, Awka. Specifically, the study sought to determine;

1. Perception of undergraduate students toward the use of PowerPoint in lecture delivery
2. Attitude of undergraduate students toward the use of PowerPoint in lecture delivery
3. The difference in male and female students' perceptions and attitudes toward the use of PowerPoint in lecture delivery

### **Research Question**

The following research questions guided the study

1. What are undergraduate students' perceptions toward using PowerPoint in lecture delivery?
2. What are undergraduate students' attitudes toward using PowerPoint in lecture delivery?

### **Research Hypothesis**

1. There is no significant difference between male and female undergraduate students' perceptions of using PowerPoint in lecture delivery.

### **Literature review**

Several researchers have written about the effectiveness of PowerPoint as a medium of lecture delivery. For example, it is an excellent instructional medium and a good tool for enhancing the effectiveness of the teaching and learning process (Sirazi et al., 2013). PowerPoint integrates documents, spreadsheets, graphics, animation and video clips from other applications into a presentation (Erdemir, 2011). The beauty of PowerPoint is its ability to complement conventional methods of teaching. Although an innovative tool, it does not seek to displace the conventional approach to teaching. When teachers use innovative teaching tools, students' achievement in internal/external examinations improves (Azuka, 2013). Similarly, undergraduate training in higher education has been revolutionized by adopting new teaching approaches, including computer-assisted learning and instructional media (Sharma, 2004). The repeated research on PowerPoint on students' academic improvement has established its effectiveness as an innovative tool. However, the

perception and attitudes of students are yet to be fully ascertained, especially at the undergraduate level of tertiary education. Thus the gap the present study sought to fill.

Perception is personal regard, interpretation and understanding of a concept. According to Longman (2021), perception is how one thinks about something. On the other hand, attitude is about how people react to a concept or environment. Mamun, Rahman, and Hossain (2012) define attitude as a psychological construct which constructs and defines a particular behaviour. The concept of attitude is considered necessary in learning conditions (Male & Lumbantoruan, 2020). This is because when students' attitude toward learning is negative, the classroom will be much disturbed (Liau, Kiat & Nie, 2014). The right attitude, therefore, is one way to stabilize and keep the class positive. Students' perception of a class can affect their attitude towards it. Onah, Obe, and Ude (2021) reported a positive perception on the use of PowerPoint by mathematics and computer studies teachers. Similarly, Dalshad, Mustafa and Ziden (2016) also reported a positive attitude of students towards PowerPoint usage in the classroom in their study.

Several researchers have reported on students' perceptions and attitudes about the use of PowerPoint in the classroom. For instance, Adellatif (2015) studied students' perception of using PowerPoint to enhance their active participation in English class. It was discovered from the study that 80% of students are excited when a PowerPoint is used in lecture delivery. Anh (2011) also researched on the efficiency of PowerPoint presentations on students' perceptions and attitudes. The study's outcome revealed that students prefer PowerPoint delivery to an outright conventional method as it enhances their academic performance.

Similarly, Onah et al. (2021) conducted a study on the perception of Enugu State Basic Science teachers about the use of PowerPoint as an innovative tool in teaching during lecture preparation, delivery and evaluation for sustainable development goals' attainment. The study revealed that teachers prefer using PowerPoint during lecture preparation and presentation. The overall positive perception and attitude from both teachers and students on the use of PowerPoint in lecture presentation point to the fact that electronic media is pivotal to effective teaching and learning. However, Ratu et al. (2021) and Xingeng et al. (2012) have cited various limitations on using PowerPoint for lecture delivery. Among the factors listed included displaying irrelevant information, neglecting interaction with students, and students with eye defects. To enhance effectiveness, PowerPoint should be planned and integrated carefully into the classroom as a tool for communication to foster the achievement of the learning objective. If done, it has the power to influence classroom learning for male and female students alike. The citations, which are rather old, will enable the present study to ascertain what is currently obtainable as regards gender and students' perceptions and attitudes toward the use of PowerPoint.

## Research Method

The research study employed a descriptive survey research design. The research method was suitably adopted because the study seeks to assess the current status quo in any given research incident (Nworgu, 2015). The population of the study was made up of 675 undergraduate final-year students from the Nine (9) Departments in the faculty of Education. A sample of 110 students was selected using Sample random sampling techniques (balloting with replacement).

The researcher constructed the instrument to collect data for the study. The Instrument was a five-point Likert-type scale with 14 items in which the students indicated their degree of agreement and disagreement about PowerPoint usage in the classroom. The questionnaire was arranged in the format of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD) with weights of 5, 4, 3, 2, 1 for positive statements and 1, 2, 3, 4, 5 for negative statements respectively. It was made up of two sections – A and B and was validated by relevant research experts.

Diagrammatically, the number line below shows the position of 3.0 for the mean of means, 1 for the lowest mean score and 5 for the highest score in raw scores of 1, 2, 3, 4, 5. Thus, the five-point rating scale and the equivalence in percentage (%) were used in taking decisions.

**Table 1: Mean Scale Decision Rule**

1	2	<b>3.0</b>	4	5
Lowest Mean		<b>Mean of Means</b>	Highest mean	

Descriptive statistics (mean and percentage) and z-test were used to analyze the collected data and to make decisions regarding the items in the questionnaire.

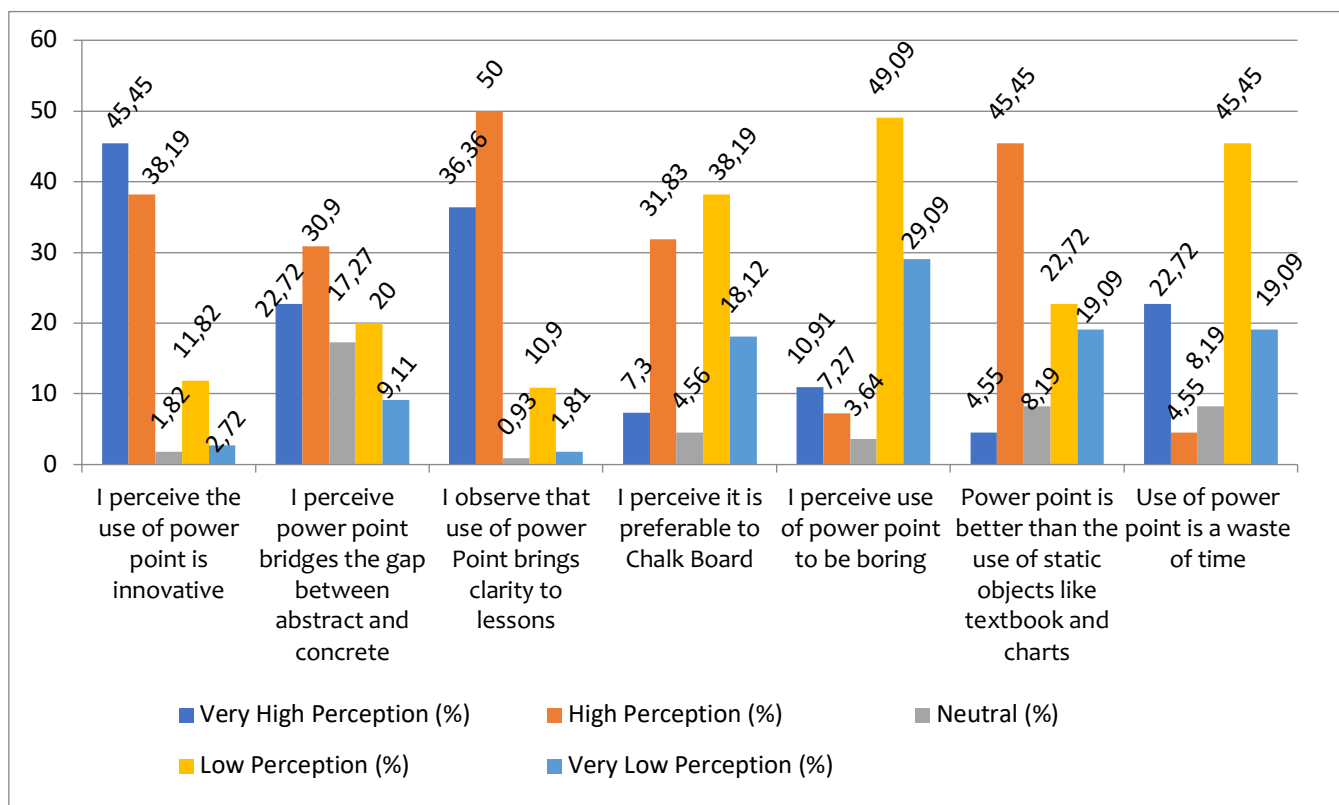
**Findings**

**Research question one:** what are undergraduate students' perceptions toward using PowerPoint in lecture delivery?

**Table 2: Mean and Percentage Responses of Undergraduate Students' Perceptions toward Using PowerPoint in Lecture Delivery**

S/N	ITEM	SA (%)	A (%)	N (%)	D (%)	SD (%)	N	$\bar{x}$	DECISION
1	I perceive the use of PowerPoint as innovative	45.45	38.19	1.82	11.82	2.72	110	4.12	Agreed
2	I perceive PowerPoint bridges the gap between abstract and concrete concept	22.72	30.90	17.27	20	9.11	110	3.31	Agreed
3	I observe that the use of PowerPoint brings clarity to lectures	36.36	50	0.93	10.90	1.81	110	4.08	Agreed
4	I perceive it is preferable to Chalk Board	7.30	31.83	4.56	38.19	18.12	110	2.72	Disagreed
5	I perceive the use of PowerPoint to be boring	10.91	7.27	3.64	49.09	29.09	110	3.45	Disagreed
6	PowerPoint is better than the use of static objects like textbooks and charts	4.55	45.45	8.19	22.72	19.09	110	3.45	Agreed
7	The use of PowerPoint is a waste of time	22.72	4.55	8.19	45.45	19.09	110	2.94	Disagreed
<b>GRAND MEAN</b>							<b>110</b>	<b>3.43</b>	<b>AGREE</b>

Table 2 above shows positive perceptions of undergraduate students at Nnamdi Azikiwe University on the use of PowerPoint during lecture delivery as measured by their mean and percentage responses. The students disagreed with Items 4, 5, and 7, which represent negative perceptions toward using PowerPoint in lecture delivery, while positive perceptions were recorded in items 1, 2, 3, and 6. That is to say that students positively perceive the use of PowerPoint for lecture delivery. This finding is also reflected in the grand mean of 3.43 on the table. Figure 1 below also highlights the outcome graphically in percentages.



**Figure 1: Mean and percentage response of students on perception**

**Research Question Two:** What are undergraduate students' attitudes toward using PowerPoint in lecture delivery?

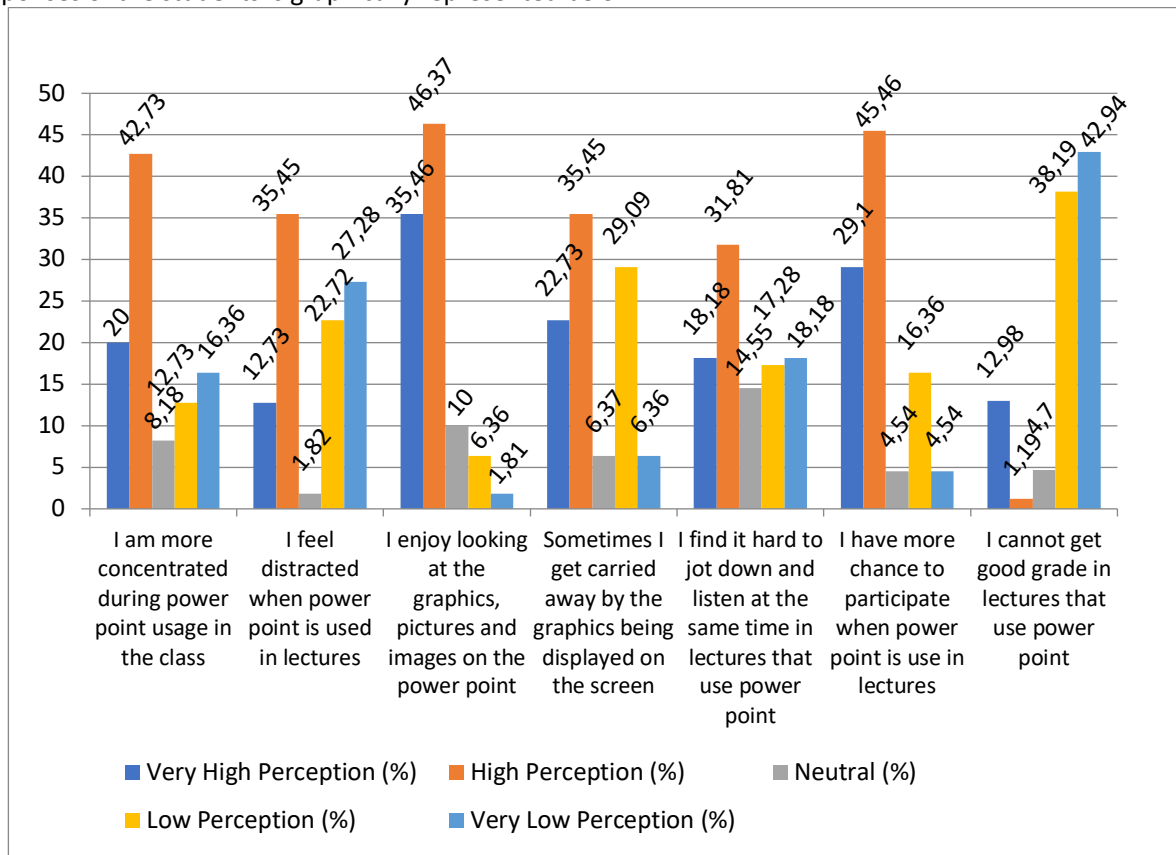
**Table 3: Mean and Percentage Responses of Undergraduate Students' Attitudes toward Using PowerPoint in Lecture Delivery.**

S/N	ITEM	SA (%)	A (%)	N (%)	D (%)	SD (%)	N	$\bar{x}$	DECISION
1	I am more concentrated during PowerPoint usage in the class	20	42.73	8.18	12.73	16.36	110	3.37	Agreed
2	I feel distracted when PowerPoint is used in lectures	12.73	35.45	1.82	22.72	27.28	110	2.84	Disagreed
3	I enjoy looking at the graphics, pictures and images on the PowerPoint	35.46	46.37	10	6.36	1.81	110	4.07	Agreed
4	Sometimes I get carried away by the graphics being displayed on the screen	22.73	35.45	6.37	29.09	6.36	110	3.72	Agreed
5	I find it hard to jot down and listen at the same time in lectures that use PowerPoint	18.18	31.81	14.55	17.28	18.18	110	3.15	Agreed
6	I have more chance to participate when PowerPoint is used in lectures	29.10	45.46	4.54	16.36	4.54	110	3.78	Agreed
7	I cannot get good grades in lectures that use PowerPoint	12.98	1.19	4.70	38.19	42.94	110	2.04	Disagreed

**GRAND MEAN**

**110 3.28 AGREE**

Table 3 above shows the mean and percentage ratings of Nnamdi Azikiwe University undergraduate students' attitudes toward using PowerPoint in lecture delivery. The students disagreed with items 2 and 7, and agreed with items 1, 3, 4, 5 and 6. The grand mean of 3.43 highlights a generally positive attitude of undergraduate students toward using PowerPoint in lecture delivery. Similarly, the percentage of the mean responses of the students is graphically represented below.



**Hypothesis**

1. There is no significant difference between male and female undergraduate students' perceptions of using PowerPoint in lecture delivery.

**Table 4: Z-test Comparison between Male and Female Undergraduate Students' Perceptions toward Using PowerPoint in Lecture 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	Not sig.
Female	78	3.05	8.12					

Table 4 above reveals no significant difference in the mean perception scores of male and female undergraduate students toward using PowerPoint in lecture delivery. This finding is because the z-cal value (0.039) is less than the z-crit value (1.96). Therefore gender has nothing to do with undergraduate students' perceptions of the use of PowerPoint in lecture delivery. Thus, the null hypothesis is sustained that there is no significant difference between male and female undergraduate students' perceptions toward using PowerPoint in lecture delivery.

**Discussion**

PowerPoint presentation is an excellent instructional medium for facilitating effective teaching and learning. Results in table 2 and figure 1 reveal that undergraduate students in tertiary institutions, especially at Nnamdi Azikiwe University Awka have positive perceptions toward using PowerPoint in lecture delivery. This

result is reflected in the mean values and percentage of students' responses. The finding is in agreement with Onah, et al. (2021), Adellatif (2015), and Anh (2011). These researchers, in their various studies, stated that students have a preference for PowerPoint lecture presentations. Adellatif (2015) specifically recorded an 80% positive perception response from the students in their study. The wide acceptance is because PowerPoint presentations make the students interested in learning. With its flexible ability to combine words, pictures, motion pictures and video clips and capture attention, the students believe it will improve their academic competence. However, as seen in the table, many students responded neutrally and negatively to the sampled items. Students' negative and neutral responses could be attributed to Ratu et al. (2021) and Syaha et al. (2020) report that PowerPoint is the most commonly used for lecture presentations. In addition, the researchers believe that some of these students may have various eye defects, which may make writing on PowerPoint ineligible for them.

The study also investigated undergraduate students' attitudes towards using PowerPoint in lecture delivery. The findings revealed a positive attitude. The mean and percentage values in table 3 and figure 2 supported this finding. The findings agree with Dalshad et al. (2016), who reported students' positive attitudes toward using PowerPoint. Based on the study, the positive perception of the students toward PowerPoint usage can be attributed to the fact that it makes the students concentrated and undistracted, have a sense of pleasure and active participation in the teaching and learning process. Although the application of PowerPoint is now a widely used software in classrooms, Xingeng et al. (2012) cautioned against the absence of corresponding classroom interaction, high speed of slides, and irrelevant information, which motivates poor attitude towards PowerPoint usage in lecture delivery. This is specifically reflected in item 4, where students agreed to the possibility of being carried away by graphics on the screen. The students may also have difficulty listening and taking down notes at the same time. This difficulty can be attributed to the speed of PowerPoint slides.

The study also revealed no significant difference in the perception of male and female students on using PowerPoint in lecture delivery, as seen in table 4. That is to say that using PowerPoint in lecture delivery has the same effect on both male and female students. It is not gender-biased and, therefore, not a barrier to using PowerPoint in the classroom.

## Conclusion

Based on the study's findings, the researchers concluded that students generally have positive and healthy perceptions and attitudes toward using PowerPoint in three main aspects; active participation and interaction, clarity of concepts, and apt concentration. PowerPoint can increase students' engagement and bridge the gap between abstract and concrete concepts. Also, it was discovered that PowerPoint has no relationship with students' genders.

Based on the findings of the study, an idea for further research is to study how postgraduate students' perceptions and attitudes influence the use of PowerPoint in lecture delivery. This is necessary since they may have been exposed to the use of PowerPoint for various presentations in their workplaces. Although the use of PowerPoint for lecture delivery at the secondary school level is still at the infant stage, a study at that level would lend a voice to the findings of this study.

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