The Use of ICT through PowerPoint Presentations in Enhancing Students' Performance Level in English 8

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Abstract — The purpose of this descriptive quantitative action research was to investigate the effect of the use of PowerPoint presentations on the academic performance of Grade 8 students. A total of forty-five (45) Grade 8 students of Dumalogdog National High School, Schools Division of Zamboanga Del Norte were included as respondents of this study. The data were presented and analyzed hence, at the end of the study, the following conclusions were drawn: for the performance level of the Grade 8 students without the use of PowerPoint presentations the results showed that the students' performance was critically low having a mean score of 15. 23 with a verbal interpretation of Poor respectively; and for the performance level of the Grade 8 students with the use of PowerPoint presentations the results showed that the students' performance increased to 23.37 mean score with a verbal interpretation of Good respectively. Based on the data collected and its analysis the difference in the academic performance of the students before and after the exposure to PowerPoint presentations is highly significant. Moreover, the significant value (2-tailed) is 0.000 which is lower than the alpha level of 0.05 indicating that the level of performance of the students with and without the use of PowerPoint presentations also has a significant difference. This suggests that the students' exposure to PowerPoint presentations did help them to improve their performance. Thus, teachers can use PowerPoint presentations to deliver engaging lessons, share learning objectives, present visual aids, and provide interactive content to their students. They can also use PowerPoint for faculty meetings, professional development, and parent-teacher conferences.

Keywords — Readiness; HUMSS Students; Ex-post-Facto; Performance; Career Goal; Potential Challenges

I. Introduction

Context and Rationale

The integration of ICTs, especially multimedia in education has changed the traditional teaching methods tremendously. Since the advent of technology, schools, and tertiary institutions have become innovative and knowledge-sharing platforms, adopting explosive, reflexive, pragmatic, and experiential approaches, which placed the individual learner at the center of learning (UNESCO, 2014). Advancements in technology across the world have propelled the education sector in the last few decades to focus on the best ways of using technology to deliver content materials in education (Okoro& Ekpo, 2016). Students, as recipients of classroom technology, have been at the center of focus in most inquiries. Research into teaching and learning

using new technologies is presently a very dynamic and relevant area of educational systems (Ghavifekr & Rosdy, 2015; Eickelmann &Vennemann (2017). A number of educational institutions have embarked on the call for the integration of technology with teaching and learning to improve content delivery.

Nowadays, the use of Information and Communication Technology (ICT) is very common in our society. Many of us today acquire different kinds of gadgets such as smartphones, smart TVs, laptops, and personal computers. As consumers of ICT, it is our bliss to be always connected with one another.

As educators in the 21st century, we need to stay connected to the standards of education imposed by the DepEd. We need to follow the new trend of teaching—the use of ICT inside the classroom to stay connected to our learners too.

In today's rapidly advancing world, technology plays a pivotal role in shaping the educational landscape and enhancing students' learning experiences. The integration of technology in education has become essential for several reasons. Thus, technology in education is indispensable in preparing students for the demands of the 21st century. By leveraging technology effectively, educators can create inclusive, engaging, and personalized learning environments that empower students to thrive in an increasingly digital world.

Based on the study conducted by Ozaslan & Maden (2013) the students learned better if the teachers used some visual tools. They also believed that PowerPoint presentations made the content more attractive which made the students capture their attention to learn. According to Corbeil's study (2007), students preferred to be exposed to PowerPoint presentations rather than textbook presentations. She also believed that students would learn more if their attention was captured via highlighting, color, different fonts, and visual effects. PowerPoint presentations could also be used for reviewing language structures (Okoro & Ekpo, 2011). According to Thamarana (2017), there are many benefits of using technology inside the classrooms like increasing motivation, improving self-concept, and mastery of basic skills.

Even though most of us are exposed to technology today, sometimes we prefer to use the traditional way of teaching — the talk and chalk method because we don't have enough time to prepare our instructional materials. As a result, some of our students are not interested to listen and participate. They are distracted to use their gadgets during class hours. Hence, their scores in the evaluation become very low. It is obvious that learning in a traditional way is not enjoyable compared to using technology in the teaching-learning process. However, the experience of introducing different ICTs in the classroom and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICT (Josol, et. al., 2023).

To address the said issue, specifically in teaching English 8, teachers shall integrate ICT in teaching their lessons. One way of doing this is by utilizing PowerPoint presentations in the

teaching-learning process to attract the students' interest. PowerPoint helps teachers prepare artistic instructional materials and allows them to use graphics in presenting their lessons.

Given this scenario, the researcher is motivated to conduct research on the effectiveness of utilizing ICT through PowerPoint presentations in teaching English 8 at Dumalogdog National High School, Dumalogdog, Sindangan, Zamboanga del Norte.

Literature Review

This section is dedicated to the significant literature resources that contributed to the research. The author should survey scholarly articles, books and other sources relevant to the area of research, providing a description, summary, and critical evaluation of each work.

II. Methodology

The study sought to answer the following questions:

1. What is the performance level of the Grade 8 students in English 8 before and after the utilization of PowerPoint presentations?

2. Is there a significant difference between the performance levels of the Grade 8 students in English 8 before and after the utilization of PowerPoint presentations?

Ha: there is a significant difference in the performance level of the students before and after utilizing the PowerPoint presentations.This section should contain detailed information about the procedures and steps followed. It can be divided into subsections if several methods are described.

Action Research Methods

a. Participants and/or Other Sources of Data and Information

Table 1. Criteria of Population and Sample Population

Criteria	Population	Sample Population
Grade 8	45	45
Total	45	45

This study utilized a total population sampling technique. A type of purposive sampling technique where a researcher collected a specific set of participants. A total of 45 students of Grade 8 - Gemini for the School Year 2022-2023 where 25 were females and 20 were males were chosen as respondents. And also, because the researcher observed that the students in this section need

more guidance in learning. They don't seem well guided, and they need more of a guidance for them to have caught certain information. To deem as advantageous on the part of the researcher. All the respondents are actually the students of the researcher.

b. Data Gathering Methods

Materials

To measure the performance level of the students, the instructional materials to be used in this experiment consist of chalk and written strips, and the other one is PowerPoint presentations.

The test materials will consist of a multiple-choice test item. Each test item will be designed to be objective and to be marked as a check or wrong. The written test consisted of 20 items.

Design and Procedure

This study was quantitative in nature to assess the performance level of the Grade 8 students in English 8 before and after the utilization of PowerPoint presentations. This study was also conducted to measure if there is a significant difference between the performance levels of the students before and after the utilization of PowerPoint presentations.

All the participants were assigned to attend the class in two sessions. In the first session, the teacher used the traditional way of teaching her lessons in a chalk-and-talk strategy where the teacher had discussed the subject matter through discussion, and in the second session, the teacher utilized PowerPoint presentations where the teacher aided herself with PowerPoint presentation. At the end of each lesson, all the respondents would be examined individually. Then all the papers were collected, checked, and recorded by the teacher.

c. Data Analysis Plan

To give meaning to the raw data gathered and to make the findings and conclusion valid, the following statistical tools are used:

The mean scores of the respondents in their pretest and posttest were interpreted in order to determine their levels of English academic performance.

Paired T-test was computed in order to determine the significant difference in the performance of the students with and without the use of PowerPoint presentations.

III. Results and Discussion

This part is the data analysis of this descriptive quantitative research which aims to investigate the effect of the utilization of PowerPoint presentations on the academic Performance of Grade 8 students. The sequence of the data presentation and analysis are as follows; the performance level of the students be described without the use of PowerPoint presentation; the performance level of the students be described with the use of PowerPoint Presentation; and the significant difference between the performance of the students without the use of PowerPoint presentation and the performance with the use of PowerPoint presentation.

Table 2 shows the mean distribution and the main score of the respondents' level of performance on the Before Exposure to PPT presentation.

The mean for pre-exposure is 15.23 and the mean percentage score is 51% with a verbal interpretation of P or poor, respectively. Thus, signifying their low performance before exposing to the intervention prepared by the researcher. Liang (2007) emphasizes the need to provide flexible, systematic learning guidance, to promote the learning of the students until they gain competence. On the other hand, it is also shown the mean distribution and the mean percentage score of the respondents' level of performance using a PowerPoint presentation. The mean for post-exposure is 23.27 and the mean percentage score is 77.57% with a verbal interpretation of G or Good, respectively. The result expresses that student's after the exposure to the intervention made by the researcher which is the online scaffolding greatly affects their performance, from having an increase of mean to 23.27 and MPS to 77.57% which has an equivalent verbal interpretation of Good. This result was corroborated by (Aleven & Koedinger, 2002; Anderson et al., 1995; Conati & VanLehn, 2000; Koedinger, 2001; Koedinger, Anderson, Hadley, & Mark, 1997) as they stated in their study that technology such as PPT had been successfully useful in adapting new setting in learning.

Table 2. Level of performance of the Respondents Before and after using the PPT presentation of grade 8 students.

Number of students	Before Mean± MPS	Category	After Mean± MPS	Category
45	15.23± 51%	Low	23.27± 77.57%	High

Mean Range Interpretation:
90.0 - 100 - Excellent   60. 0 – 69.9 - Fair
80.0 - 89.9 - Very Good   50.0 –59.9- Poor
70.0 - 79.9 - Good   Below 50 – Very Poor

As shown on the table 3 the result of the testing hypothesis indicates that there is significant difference of science academic performance of the students' with and without the use of PowerPoint presentation. The two tailed-test with the decrease of freedom of 47 and the level of

confidence of 95% has a significant value of 0.000 which is very much lower than the alpha level of 0.05. This basically means that the difference of the academic performance of the students without the use of PowerPoint presentation and with the use of PowerPoint presentation is highly significant. This suggests that the students' exposure to PPT presentation did help them to improve their skills and performance.

Research has illustrated that PowerPoint presentation in teaching makes an impact on students' learning performance (Chen, & Law, 2016). Miller, et al (2015) conducted a study on competence of the nursing students and recommended scaffolding to improve their skills.

Table 3. Test of Significant Difference of academic performance of the Students' before and after using PowerPoint presentations.

Variables	Mean	t-value	p-value	Interpretation
Before	15.23	17.306	0.000	Significant
After	23.27			

*Significant level at $\alpha = 0.05$.

Hypothesis:

Ha: there is significant difference of the academic performance of the students with and without the use of PowerPoint presentations.

IV. Conclusion

Based on the findings the conclusions are the following:

1. The mean score of the students before and after the exposure of the PowerPoint presentation has a significant difference, ranging from 15.23 for the pre-test to 23.27 for the post-test.

2. The significant value (2-tailed) is 0.000 which is lower than the alpha level of 0.05 indicates that the level of performance of the students with and without the use of PowerPoint presentation also has a significant difference.

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