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| RESEARCH ARTICLE

Reportorial Activities with PowerPoint Presentation: their Impacts to Retention Level of the Learners

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| ABSTRACT
This study investigated the impact of incorporating PowerPoint presentations into reportorial activities on student knowledge retention. Using both pretests and posttests, the researchers carefully compared a control group with an experimental group. Results showed significantly improved posttest scores in the experimental group, clearly indicating enhanced knowledge retention through the use of PowerPoint presentations as an educational tool. While students in both groups demonstrated measurable improvement, the experimental group exhibited a noticeably higher proportion of very good scores compared to the control group. This study also utilized a survey questionnaire on student perceptions, focusing on aspects such as clarity, visual appeal, and ease of use. Responses were strongly positive across these areas, although the relationship between these perceptions and posttest scores varied between the two groups. Notably, only visual appeal showed a statistically significant relationship with posttest scores in the experimental group, suggesting that students may retain information better when presentations are visually engaging. The findings suggest that well-designed PowerPoint presentations can be a valuable and effective tool for enhancing learning outcomes, particularly when they are aligned with sound pedagogical principles. Further research is strongly recommended to explore the impact of interactive features and to examine the long-term retention effects of such multimedia instructional methods.

| KEYWORDS
educational technology, retention, visual presentation, engagement

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1. Introduction

Powerpoint, developed by Microsoft, was first released in 1987 as a graphical presentation program. Its initial purpose was to provide a user-friendly platform for creating visually appealing presentations, replacing traditional overhead projectors and slide shows. The software quickly gained popularity due to its intuitive interface, wide range of features, and ability to integrate multimedia elements, making presentations more interactive and impactful.

In the realm of reportorial activities, powerpoint transformed the way information was presented. Before its advent, reporting often relied on traditional methods such as handwritten notes, overhead projectors, or simply speaking from memory. These methods often lacked the visual appeal and organization that powerpoint provided. With its ability to incorporate text, images, charts, and multimedia, powerpoint became a standard tool for delivering reports in a structured, engaging, and visually compelling manner.

According to the study by Anigbo and Ebuoh (2019), titled An Analysis of the Relationship Between PowerPoint Instruction and Students' Retention Scores in Computer Science (Database Management System) in Colleges of Education in River State, their

findings revealed that before the implementation of powerpoint, learners exhibited low retention levels in various educational settings. Students with low retention levels faced various challenges and negative outcomes across different educational levels. In secondary education, students who were retained often experienced a lower sense of belonging, leading to feelings of social alienation, decreased school performance, and a higher likelihood of dropping out early (Van et al., 2022).

Teachers have always sought ways to help their students learn better. Therefore, it is essential to investigate how reportorial activities using powerpoint presentations enhanced the retention levels of learners. This study aimed to determine whether powerpoint presentations is an effective tool for helping students remember information, particularly during reports or presentations. It also compared the retention levels of students who used powerpoint with those who relied on other learning methods.

Studying reportorial activities via powerpoint presentations helped educators become more credible teachers in the future. The ability to integrate technology into the classroom is demonstrated through the use of powerpoint in teaching methodology, and this skill is highly regarded in modern educational systems. This study aimed to provide insights, strategies, and best practices for educators, trainers, and presenters who used visual aids in their reportorial activities through a thorough review of the literature on the effects of powerpoint presentations on retention levels in educational settings.

This study focused on examining the impact of powerpoint presentations on learners' retention levels during reportorial activities, comparing their effectiveness to traditional methods. The data collection was conducted with first-year BSIT students at Mindanao State University – Lanao del Norte Agricultural College.

2. Literature Review

2.1 Retention Level

Effective learning retention is significantly influenced by the use of multimedia resources and instructional design. According to Mayer (2024), principles such as coherence and signaling in multimedia design guide learners' attention and enhance retention. Aprilia (2024) adds that active learning strategies play a vital role in maximizing the effectiveness of multimedia by encouraging learners to engage with content meaningfully.

2.1.1 Retention of Information

Retention, defined as the ability to remember or hold onto information over time, is shaped by factors like training quality, learner preferences, and material relevance (Long & Van, 2023). Mayer (2024) emphasizes that learners process information through dual channels—verbal and visual. Thoughtfully designed multimedia that reduces extraneous cognitive load allows learners to focus on essential information, improving retention ("Evidence of Content Learning through Animations Developed Based on the Cognitive Theory of Multimedia Learning", 2023).

Glaser and Schwan (2020) further support this by noting that verbal and visual cueing enhance both retention and the localization of pictorial elements. Involving learners in meaningful interactions with multimedia leads to better knowledge integration and organization (Mayer, 2024). It has been demonstrated that propositional level powerpoint presentations with well-chosen content boost comprehension over time and in the short term (Anigbo & Ebuoh, 2019).

2.1.2 Importance

Visual design elements—such as color, font, and layout—positively impact retention, as found in Johnson and Smith's (2020) study on powerpoint design. Garashkina & Druzhinina (2023) argue that effective instructional design, especially one involving cognitive engagement strategies, can improve educational outcomes, particularly in teacher training.

Active learning shifts students from passive recipients to proactive participants (Barnett-Itzhaki et al., 2023). Techniques like group work, educational games, and brainstorming encourage creativity and critical thinking, leading to deeper learning (Garvasiuk et al., 2023). Multimedia learning, which incorporates text, images, audio, and video, addresses various learning styles and creates more memorable experiences (Agisni et al., 2023).

2.1.3 Factors Affecting Retention

Learning retention is shaped by instructional methods, cognitive processing, and individual learner differences (Ritter, 2021). Group composition also matters. Pinto (2020) and Zhang et al. (2019) found that students in homogeneous knowledge-level groups perform better due to easier communication and targeted instructional strategies. When learners start from a similar baseline, educators can more effectively meet collective learning needs.

2.2 Reportorial Activities Using PowerPoint

Agisni et al. (2023) highlight that PowerPoint presentations significantly enhance understanding and retention compared to traditional lectures, especially when visuals are effectively utilized. Addimando (2024) stresses that clarity and engagement are essential for effective communication in presentations. However, Freeman et al. (2014) caution that ease of implementation alone does not guarantee improved learning outcomes. Rather, student engagement and active participation are critical to achieving meaningful learning.

2.2.1 PowerPoint Presentation Issues

Despite its benefits, powerpoint has drawbacks. Yaris and Wawanitikit (2019) identified issues like the split-attention effect, visual clutter, and plagiarism, which can hinder learning. Abrol (2023) emphasizes the importance of aligning multimedia use with learner preferences to promote engagement. Stratton (2019) also warns that pre-tests might sensitize learners to upcoming content, potentially inflating post-test scores without genuine knowledge acquisition.

2.2.2 Disadvantages

Powerpoint can induce cognitive overload when slides contain too much information (Prayudha, 2023). Mufti et al. (2023) note that usability plays a key role in ensuring students can effectively engage with multimedia content. According to Kusumah (2024) and Alwi & Agustia (2024), multimedia—including video—increases student motivation and improves academic performance.

2.3 PowerPoint Slide Design

The design of powerpoint slides plays a key role in information delivery. According to Hu (2022), including images in slides enhances reflective learning and promotes more enjoyable learning experiences. However, Shetibayev et al. (2024) argue that traditional teaching, with its emphasis on rote learning, can disengage students. Malechko et al. (2024) add that although traditional instruction supports basic understanding, it often fails to promote critical thinking and creativity when compared to more interactive methods.

2.3.1 Slide Integration

Integrating multimedia—text, images, animation, video—in powerpoint makes slide presentations more effective and engaging (Osman & Hamzah, 2020). Ishartono et al. (2022) demonstrated that integrating powerpoint within a Flipped Learning model significantly improved student understanding. The PowerPoint-Based Flipped Learning (PBFL) model produced significant differences in academic performance across various classes, outperforming traditional instruction.

2.3.2 Visual Aids

Visual aids, including pictures, videos, diagrams, and graphs, enhance motivation, retention, and comprehension (Azamjonovna, 2023). Qasserras (2024) states that visual design influences learning outcomes by improving engagement and understanding. Pirmatoy et al. (2024) emphasize that visuals must support the verbal content rather than distract from it. Research by Rajasekaran et al. (2020) and Clyatt et al. (2019) confirms that visual appeal and simplified visual representations can enhance comprehension and memory retention across various learning environments.

3. Methodology

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3.1 Research Design

This study followed the randomized control trial design, which was used to assess the effectiveness of an intervention by randomly assigning participants into different groups to minimize bias and ensure reliable results. This design was implemented by randomly dividing learners into an experimental group, which engaged in reportorial activities using powerpoint presentations, and a control group, which followed traditional learning methods without powerpoint. Both groups took a pretest to assess their initial knowledge before undergoing their respective learning approaches, followed by a posttest to measure their retention levels. The comparison of pretest and posttest scores using statistical analysis helped determine whether reportorial activities with powerpoint presentations significantly improved learners' retention compared to traditional methods, ensuring a valid and reliable assessment of their impact.

3.2 Research Locale

Mindanao State University – Lanao del Norte Agricultural College (MSU-LNAC) is a rural public university that focuses mainly on agriculture and education. It serves students from surrounding towns and provinces, many of whom come from farming families and humble backgrounds. The student population is diverse, composed of both Muslims and Christians, reflecting the multicultural and inclusive community of Sultan Naga Dimaporo.While students have some exposure to technology, it is not always consistent,

so introducing tech-based learning tools like powerpoint presents both an exciting opportunity and a learning curve for many of them.

The campus is peaceful and lush, surrounded by rice fields, trees, and vibrant plants that create a calm and welcoming atmosphere. MSU-LNAC has the basic facilities needed for learning—classrooms, computer laboratories and areas for hands-on agricultural training. The local culture values harmony, with traditions like the Tulingan Festival bringing the community together. Academically, the school offers programs that aim to equip students with practical skills and knowledge, while also slowly adapting to more modern, tech-integrated teaching methods.

3.3 Respondents of the study and sampling technique

The respondents of this study were the selected first-year BSIT students at Mindanao State University-Lanao del Norte Agricultural College (MSU-LNAC). These students were officially enrolled in the academic year 2024-2025, and most of them were residents of Poblacion, Sultan Naga Dimaporo, Lanao del Norte. They are highly engaged, especially when it comes to technology, as most of them are ICT students in senior high school. When it comes to powerpoint presentations, they are very familiar with using them during class activities. Their exposure to digital tools in their ICT track has made them comfortable navigating and presenting slides, contributing actively during discussions and group work. The researchers surveyed 70 first-year BSIT students at MSU-LNAC and randomly divided them into two groups: the control group and the experimental group. A pretest was administered before the start of the reporting session. After the reporting, a posttest was given to assess the students' knowledge. Following the reporting session, the researchers conducted a survey questionnaire to evaluate the reporter's teaching style using a powerpoint presentation.

3.4 Research Instruments

The researchers used the following: test quisttionnarie (Pretest and Posttest), consisted 30 items. Another instrument was the survey questionnaire for the students perception on reporting teaching style, the questionnaire contain 45 questions, divided into three areas—clarity, visual appeal, and ease of use—with 15 questions in each area to look at different parts of the students' experience. The clarity domain assessed how well the content was presented, focusing on flow, language, and understanding. The visual appeal domain looked at slide design, color, font readability, and images. The ease of use domain measured how comfortable and easy it was for students to follow the presentation. The respondents answered the questions using the likert- scale: 4- Strongly Disagree, 3- Agree, 2- Disagree, and 1- Strongly Disagree.

3.5 Data Gathering

The first step involved obtaining a permission letter to conduct the study. After securing the necessary permissions, the researcher conducted a pilot test with first-year Agroforestry students. Following the pilot testing, Cronbach's Alpha was used to test the reliability of the questionnaire.

For the selection of respondents, seventy (70) first-year BSIT students were randomly chosen and evenly divided into two groups: a control group and an experimental group, each consisting of thirty-five (35) students. The experimental procedure followed a structured sequence; first, a pretest was administered to the control group, after which the reportorial activity was conducted without the use of powerpoint presentations. The same researcher facilitated the reporting for consistency. After the reportorial activity, a posttest was given to assess students' retention levels, and their responses were collected.

In the next session, the experimental group underwent the same procedure. A pre-test was first administered, followed by a reportorial activity using powerpoint presentations, conducted by the same researcher. After the reporting session, a posttest was given to measure the students' retention levels. This was done simultaneously. Once the experimental activities were completed, a survey was conducted to determine their perception on the use of powerpoint in reportorial activities. Finally, after completing the data collection phase, all collected data were tallied and analyzed using both quantitative and qualitative methods, providing a comprehensive understanding of the findings.

3.6 Data Analysis

To make an accurate interpretation of the data gathered, the following statistical tools were used:

1. **Frequency and Percentage distribution** were used to determine the spread of student scores across defined score ranges in both the control and experimental groups. This method provided a clear view of the students' prior knowledge and retention levels based on their performance in the pretest and posttest.

2. **Weighted mean** was utilized to measure students' perceptions regarding the use of PowerPoint presentations in terms of three key areas: clarity, visual appeal, and ease of use. Each statement within the perception survey was rated using a Likert scale, and the responses were averaged to obtain a weighted mean.

3. **Chi-square** was used to determine if there is a significant between students' perceptions (Clarity, visual appeal, ease of use) and their performance categories (Very Poor, Poor, good, very good, excellent) in the post-test.

4. **T-test** was used to compare the pretest and posttest scores within the control group and the experimental group to identify significant differences..

4. Results

4.1 Prior Knowledge of the Respondents During Pretest

4.1.1 Prior Knowledge of the Control Group

As shown in the table 4.1, out of 35 respondents, majority (51.4%) scored between 13-18, verbal interpretation Good. The presence of only 5.7% of respondents scoring between 19-24 indicates that very few students excelled in their pretest performance.
These results suggest that the respondents have a basic understanding of the subject matter but lack deeper or more advanced knowledge. The absence of excellent scores shows that no respondent fully mastered the subject matter before any teaching began. Additionally, the fact that nearly half of the respondents scored in the poor category points to gaps in understanding that need to be addressed during the teaching process.

According to the study of Sana et al., (2021), students scored low in the pre-test because they had little to no prior knowledge of the subject matter. Pretests are meant to show what students already know, and low scores simply mean they haven't learned the material yet.

Table 4.1.1 Prior Knowledge of the Respondents in Control group during Pretest

SCORE RANGE	FREQUENCY (f)	PERCENTAGE (100%)	VERVAL INTERPRETATION
25- 30	0	0	Excellent
19- 24	2	5.7	Very Good
13- 18	18	51.4	Good
7- 12	15	42.9	Poor
0-6	0	0	Very Poor

4.1.2 Prior Knowledge of the Experimental Group

The pretest scores of the respondents in the experimental group provided insights into their baseline understanding of the subject matter before the intervention. Table 4.2 presents the frequency and percentage distribution of these scores.
As shown in the table 4.2, a significant majority of the respondents (85.7%) scored within the 13-18 score range. This suggests that a large portion of the participants has a good grasp of the concepts being assessed. Only a very small percentage (5.7%) scored in the 19-24 range, suggesting a very good verbal interpretation.

The absence of respondents in the 0-6 and 25-30 ranges indicates that the pretest was appropriately to the participants' general knowledge level. There were no individuals who scored extremely low or extremely high, suggesting a relatively homogeneous group in terms of their initial understanding.

Research indicates that students in homogeneous groups often show significant improvements in performance, as they can engage more effectively with the material and support each other's learning (Pinto, 2020). In addition, Studies by Zhang et al.., (2019) shows that students in groups with similar levels of knowledge are more likely to improve their performance. When everyone has a similar starting point, it reduces the challenge of dealing with big differences in understanding. This makes it easier for teachers to use strategies that meet the needs of the whole group, which can lead to better and more consistent learning results..

Table 4.1.2. Prior Knowledge of the Respondents in Experimental Group during Pretest

SCORE RANGE	FREQUENCY (f)	PERCENTAGE (100 %)	VERBAL INTERPRETATION
25-30	0	0	Excellent
19-24	2	5.7	Very Good
13-18	30	85.7	Good
7-12	3	8.6	Poor
0-6	0	0	Very Poor

4.2 Retention level of the Respondents during Posttest

4.2.1 Retention Level of Respondents in Control Group

In table 4.3, it is evident that the majority of students, 85.7% (30 out of 35), scored between13-18, indicating a level of performance classified as good. This suggests that most students have a foundational understanding of the material covered. However, 5.7% (2 students) achieved scores between 19-24, suggesting that a minority of students performed very good.

This suggests that while most students did reasonably well after instruction, there were very few outstanding performances. The fact that no participants scored in the excellent range indicates that the traditional teaching method may not have been enough to help students reach higher levels of understanding.

The majority of students being in the good range shows that the traditional method, despite its shortcomings, helped most students understand the material at a moderate level. However, the absence of excellent scores suggests that the teaching approach may have hit a limit, preventing students from fully mastering the content. This indicates that traditional teaching methods might need to be improved with more interactive or engaging strategies (like using multimedia or student-centered activities) to help students move beyond the good category and encourage deeper learning.

According to the study of Shetibayev et al (2024), in traditional teaching often emphasizes rote learning and passive engagement, which can alienate students who require more interactive or personalized approaches. Additionally, traditional teaching methods, which often rely on lectures, can lead to moderate academic success, but may not effectively encourage critical thinking, creativity, and a deep understanding of the material. For example, Malechko et al. (2024), found that while traditional instruction helps with basic understanding, it may not be as good at promoting higher-level thinking skills compared to more interactive teaching methods.

Table 4.3. Retention level of the Respondents in Control Group during Posttest

SCORE RANGE	FREQUENCY (f)	PERCENTAGE (100 %)	VERBAL INTERPRETATION
25-30	0	0	Excellent
19-24	2	5.7	Very Good
13-18	30	85.7	Good
7- 12	3	8.6	Poor
0-6	0	0	Very Poor

4.2.2 Retention Level of the Respondents in Experimental Group

The posttest scores of the experimental group reveal a significant trend in student performance. As shown in Table 4.4, an overwhelming majority (91.4%) of students scored between 19-24, indicating a very good understanding of the material. Additionally, 8.6% of students achieved scores between 25-30, reflecting a verbal interpretation of excellent. This distribution suggests that the approach (Reportorial with the used of PowerPoint presentation) was highly effective, enabling most students to excel in their understanding. The absence of lower scores indicates a successful learning environment, highlighting the potential benefits of the instructional methods used in this group.

Research by Ishartono et al. (2022) found that integrating powerpoint in the flipped learning model significantly increased students' understanding compared to conventional methods. Based on the results obtained, it shows that integration of PowerPoint in learning based on the flipped learning (PowerPoint-Based Flipped Learning / PBFL) model has a good significance in increasing students 'understanding, The experimental approach demonstrated effectiveness, as evidenced by the significant differences in mean scores among the three classes tested. A flipped learning context, integrating PPP significantly boosted students' understanding compared to traditional approaches..

SCORE RANGE	FREQUENCY (f)	PERCENTAGE (100 %)	VERBAL INTERPRETATION
25-30	3	8.6	Excellent
19-24	32	91.4	Very Good
13-18	0	0	Good
7-12	0	0	Poor
0-6	0	0	Very Poor

4.3 Difference in the Pretest and Posttest scores of Respondents

4.3.1 The Control Group

Based on the results shown in table 4.5, the p-value 0.001 with 34 degrees of freedom which is less than 0.05 level of significance means, that there is a failure to accept the null hypothesis stating that there is no significant difference between pretest and posttest scores of control group. With this result, it implies that there is a significant difference in the pretest and posttest scores of the control group. This suggests that the control group demonstrated an overall positive shift in performance, despite not being exposed to the intervention involving reportorial activities with powerpoint presentations.

The statistically significant difference between pretest and posttest scores of the control group suggests that learning occurred through traditional teaching methods. This means the traditional teaching methods helped students better understand the material, showing they can be effective for learning.

The results align with the study of Şan & Kış, (2018) that traditional teaching methods have demonstrated effectiveness in enhancing students' understanding of material. A meta-analysis revealed that traditional methods in geometry and numbers learning domains significantly improved academic achievement, with an average effect size of 0.83 standard deviations, indicating a strong positive impact on student success. Furthermore, traditional learning approaches, such as structured lectures and textbook exercises, are often perceived as beneficial for their clarity and organization, despite the growing popularity of modern, interactive methods (Salainti & Fansury, 2024).

Test Score	Posttest score		
	p-value	DEGREE OF FREEDOM	Interpretation
Pretest score	0.001	34	Significant

Level of significance = 0.05

4.3.2 The Experimental Group

Based on the results shown in table 4.6, the p-value 0.01 which is less than 0.05 level of significance means, the null hypothesis stating that there is no significant difference between pretest and posttest scores of experimental group is rejected. With these results, it implies that there is a significant difference in the pre-test and posttest score of the experimental group. The data reflect a substantial increase in retention levels among the learners in the experimental group, who were exposed to reportorial activities with PowerPoint presentations as part of their learning process.

The significant improvement in posttest scores of the experimental group suggests that incorporating reportorial activities with PowerPoint presentations effectively enhances the retention level of learners. This finding implies that integrating visual and auditory stimuli into teaching methods engages students more actively, fostering deeper understanding and better recall of concepts. The result highlights the importance of employing interactive and technology-enhanced learning strategies to achieve superior academic outcomes.

According to Abrol (2023), the integration of multimedia elements caters to diverse learning styles, promoting active participation and engagement. The cognitive theory of multimedia learning highlights dual channels for processing verbal and visual information, which helps in managing cognitive load and enhancing learning efficiency (Mayer, 2024). Verbal and visual cueing together improve retention and localization of pictorial elements, demonstrating the benefits of coordinated multimedia learning strategies (Glaser & Schwan, 2020). Therefore, engaging learners in meaningful interactions with multimedia content promotes better organization and integration of knowledge.

Test Score	Posttest score		
	p-value	**DEGREE OF FREEDOM**	**Interpretation**
Pretest score	0.001	34	Significant

Level of significance = 0.05

4.4 Difference in Posttest Scores of the Control Group and Experimental Group

Based on the results shown in table 4.7, the p-value 0.001 which is less than 0.05 level of significance means, that there is a failure to accept the null hypothesis stating that there is no significant difference between pretest and posttest scores of control and experimental groups. With this result, it implies that there is a significant difference between the control and posttest scores of the experimental group. This demonstrates that learners in the experimental group, who were exposed to reportorial activities with PowerPoint presentations, outperformed those in the control group. This indicates a clear advantage of the intervention in improving retention levels.

The significant difference between the posttest scores of the experimental and control groups highlights the effectiveness of reportorial activities with PowerPoint presentations in enhancing retention among learners. This implies that integrating multimedia and interactive strategies into teaching methodologies can lead to better comprehension and recall compared to traditional methods. The results advocate for a shift towards incorporating technological tools in classrooms to make learning more engaging and impactful. These findings could serve as a basis for educators to revise instructional approaches, focusing on more dynamic and learner-centered practices.

According to Kusumah (2024), video learning media captures students' attention, leading to increased participation in lessons. Students report higher motivation levels when learning through multimedia, which correlates with improved academic performance. The study indicates that PowerPoint supported lectures with slides at propositional level significantly improve comprehension and retention.

Test Score	Experimental group (Posttest score)		
	p-value	**DEGREE OF FREEDOM**	**Interpretation**
Control group (Posttest score)	0.001	34	Significant

Level of significance = 0.05

4.5 Perception of the Respondents in the use of PowerPoint

4.5.1 Perception of the Respondents in terms of Clarity

The perceptions of respondents regarding the clarity of the reporter's PowerPoint presentation were assessed through a series of statements, as outlined in Table 4.8. The results indicate a strong agreement among participants, with a grand weighted mean of 3.83, reflecting an overall positive perception of the presentation's clarity.

As shown in the table 4.8, the highest-rated statement is, the information presented by the reporter was clear and concise, which received a mean score of 3.94, indicating strongly agree. Conversely, the statement with the lowest mean score, "The reporter's speech was engaging and kept my attention throughout the presentation" scored 3.54, yet still falls within the strongly agree range. This highlights that while the presentation was generally engaging, there may be slight room for improvement in maintaining audience attention.

The positive perceptions of the presentation indicate that the use of PowerPoint as a pedagogical tool can enhance clarity and engagement, leading to better student outcomes. The overall grand weighted mean of 3.83 reinforces this implication, suggesting that the teaching method employed was effective in conveying information in a clear and engaging manner.

A study by Strauss et al (2019), found that the use of multimedia presentations, such as PowerPoint, can significantly improve understanding and retention of information compared to traditional lecture formats. Their research indicates that when visuals are used effectively, they can enhance cognitive processing, leading to better learning outcomes. Thus, According to Addimando (2024), effective communication hinges on clarity and engagement, both of which were demonstrated in the reporter's presentation. The results from Table 4.8 indicate that the clarity of the presentation played a significant role in the audience's understanding and engagement with the material presented. Clarity ensures that messages are easily understood, reducing the likelihood of misinterpretation.

Table 4.8. Perception of the respondents in terms of clarity (N=35)

	STATEMENT	WEIGHTED MEAN	INTERPRETATION
1.	The reporter's PowerPoint presentation was easy to follow.	3.83	Strongly Agree
2.	The information presented by the reporter was clear and concise.	3.94	Strongly Agree
3.	The reporter effectively used visuals (images, graphs, charts) to enhance understanding.	3.69	Strongly Agree
4.	The reporter's speech was engaging and kept my attention throughout the presentation.	3.54	Strongly Agree
5.	The organization of the PowerPoint slides helped me understand the content better.	3.74	Strongly Agree
6.	The reporter used simple language that was easy to comprehend.	3.77	Strongly Agree
7.	The transition between slides were smooth and aided in the flow of the presentation.	3.77	Strongly Agree
8.	The reporter effectively summarized key points to reinforce understanding.	3.80	Strongly Agree
9.	The used of animations or effects in the PowerPoint presentation was helpful.	3.57	Strongly Agree
10.	The reporter's body language and gestures complemented the content of the presentation.	3.77	Strongly Agree
11.	The reporter encouraged audience interaction and participation during the presentation.	3.63	Strongly Agree
12.	The reporter effectively answered question from the audience	3.74	Strongly Agree
13.	The presenter's voice volume and tone were appropriate for the presentation.	3.86	Strongly Agree
14.	The overall design of the PowerPoint slides was visually appealing and not distracting	3.86	Strongly Agree
15.	The reporter's use of examples and real-life scenarios helped in understanding the topic.	3.71	Strongly Agree
Grand weighted mean		**3.83**	**Strongly Agree**

4.5.2 Perception of the Respondents in terms of Visual Appeal

The findings presented in Table 4.9 provide a comprehensive overview of respondents' perceptions regarding the visual appeal of PowerPoint presentation. The overall grand weighted mean of 3.78 indicates a strong positive perception, suggesting that the visual design elements significantly contributed to the effectiveness of the presentation. The perception of visual appeal encompasses several key components, each of which received a strongly agree rating from respondents, reflecting their satisfaction with various aspects of the presentation's design.

It implies that the PowerPoint presentation was not only visually appealing but also effective in enhancing the audience's understanding of the topic. The respondents' strong positive perceptions emphasize the importance of thoughtful design and effective use of visual elements in educational contexts.

As supported by research in educational psychology, effective visual design can significantly impact learning outcomes by fostering engagement, comprehension, and retention of information (Qasserras, 2024). Thus, the findings of this study underscore the critical role that visual appeal plays in the overall effectiveness of presentations in educational settings. Moreover, a study by Agisni et al. (2023) found that well-designed multimedia presentations that incorporate appropriate visuals can significantly enhance learners' understanding and retention of information. Thus, the study emphasizes that visuals should support the verbal content, rather than distract from it, aligning with the respondents' views that visual elements were not overwhelming or distracting (3.80).

Table 4.9. Perception of the Respondents in terms of Visual Appeal (N=35)

	STATEMENT	WEIGHTED MEAN	INTERPRETATION
1.	The design of PowerPoint slide was visually appealing.	3.69	Strongly Agree
2.	The color of scheme used in the presentation was eye-catching and enhanced the content.	3.77	Strongly Agree
3.	The front style and size were easy to read and contributed to the overall visual appeal.	3.74	Strongly Agree
4.	The use of images and graphic in the presentation added to visual appeal.	3.83	Strongly Agree
5.	The layout of the slides was well organized and aesthetically pleasing.	3.71	Strongly Agree
6.	The use of animations and transitions enhanced the visual appeal of the presentation.	3.83	Strongly Agree
7.	The visual elements (charts, graphs, diagrams) helped in understanding the content.	3.83	Strongly Agree
8.	The presenter's use of multimedia (videos, audio) added the visual appeal of the presentation.	3.71	Strongly Agree
9.	The visual elements on the slides were not overwhelming or distracting.	3.80	Strongly Agree
10.	The use of icons and symbols effectively conveyed information visually.	3.71	Strongly Agree
11.	The presenter's use of white space on the slides made the content easier to digest.	3.77	Strongly Agree
12.	The consistency in design elements across slides contributed to the visual appeal.	3.7	Strongly Agree
13.	The presenter's choice of visual helped in retaining the audience's attention.	3.86	Strongly Agree
14.	The presenter's use of info graphics improved the visual appeal of the presentation.	3.77	Strongly Agree
15.	The overall visual appeal of the PowerPoint presentation enhance	3.86	Strongly Agree
Grand weighted mean		**3.78**	**Strongly Agree**

4.5.3 Perception of the Respondents in terms of Ease of Use

The perceptions of respondents regarding the ease of use of the PowerPoint presentation were evaluated through a series of statements, as illustrated in Table 4.10. The results indicate a strong agreement among participants, with a grand weighted mean of 3.76, reflecting an overall positive perception of the presentation's usability.

As shown in the table 4.10, the highest-rated statement is, the presenter provided clear instructions on how to interact with the presentation, having a mean score of 3.94, indicating strong agreement. This suggests that respondents found the guidance provided by the presenter to be effective, which is crucial for facilitating audience engagement and interaction with the content.

Conversely, the statement with the lowest mean score is, "The presenter's use of navigation shortcuts (keyboard shortcuts, slide thumbnails) facilitated smooth transitions," which scored 3.60. While this rating still falls within the strongly agree range, it suggests that there may be some room for improvement in how navigation features are utilized or explained during the presentation.

The data implies that effective navigation and usability features in powerpoint presentations are essential for enhancing the audience's learning experience. The grand weighted mean of 3.76 reinforces the notion that when presenters prioritize ease of navigation and clarity, they create a more engaging and effective learning environment.

According to Mufti et. al (2024), the usability of a presentation is pivotal in ensuring that the audience can effectively engage with the material presented. The study highlights the importance of usability in multimedia learning environments. When learners can easily navigate through content, they are more likely to engage with the material and achieve better learning outcomes. The results from Table 4.10 highlight that the ease of use of the PowerPoint presentation played a significant role in the audience's overall learning experience, ensuring that the content was accessible and engaging.

Table 4.10. Perception of the Respondents in terms of Ease of Used (N= 35)

	STATEMENTS	WEIGHTED MEAN	INTERPRETATION
1.	Navigating through the PowerPoint slides was easy to intuitive.	3.83	Strongly Agree
2.	The presenter effectively guided the audience through the presentation.	3.77	Strongly Agree
3.	The use of interactive feature (hyperlinks, buttons) made it easy to access additional information.	3.77	Strongly Agree
4.	The presenter provided clear instructions on how to interact with the presentation.	3.94	Strongly Agree
5.	The use of table of contents or agenda slides helped in navigating the presentation.	3.74	Strongly Agree
6.	The presenter utilized a consistent layout and design across all slides for ease of understanding.	3.74	Strongly Agree
7.	The presenter provided a clear roadmap of the presentation at the beginning.	3.83	Strongly Agree
8.	The presenter's use of annotations or callouts on slides helped in emphasizing key points.	3.74	Strongly Agree
9.	The presenter's use of navigation shortcuts (keyboard shortcuts, slides thumbnails) facilitated smooth transitions.	3.60	Strongly Agree
10.	The presenter's use of slide notes or annotations was helped in providing additional context.	3.86	Strongly Agree
11.	The presenter's use of a laser pointer or highlighting tool assisted in grawing attention to specific content.	3.69	Strongly Agree
12.	The presenter's use of slide transitions and animations did not hinder the ease of understanding.	3.74	Strongly Agree
13.	The presenter's use of slide numbering or progress indicators helped in tracking the presentation flow.	3.66	Strongly Agree
14.	The presenter's us e of consistent font style and size across slides aided in readability.	3.80	Strongly Agree
15.	The overall ease of use of the PowerPoint presentation enhanced my learning experience.	3.77	Strongly Agree
Grand weighted mean		**3.76**	**Strongly Agree**

4.6 Significant Relationship of Perception of the Experimental Group to the Retention level during Posttest

4.6.1 Relationship between the Perception of the Respondents in terms of Clarity and the Posttest Scores of the Experimental Group

Based on the results shown in table 4.11, the p-value 0.570 which is greater than level of significance of 0.05. Thus, the table reveals that there is no significant relationship between the perception of the respondents and the posttest scores of the experimental group. This implies that the null hypothesis which states that there is no significant relationship between the perception of the respondents and the posttest scores of the experimental group is accepted.

The finding implies that the clarity of presentations, while important for immediate understanding, might not be a dominant factor in enhancing retention among learners. This suggests that other pedagogical elements, such as active learning techniques, emotional engagement, or interactive discussions, could have a stronger influence on retention. It highlights the need to integrate diverse instructional methods to maximize learning outcomes effectively.

According to the study of Mohammed et al. (2020) learners achieve better retention and understanding when they actively engage in the learning process. This approach contrasts with traditional methods where information is passively received. Active involvement through problem-solving, collaborative learning, and hands-on activities fosters cognitive and emotional engagement, leading to deeper processing and enhanced memory consolidation.

Table 4.11. Relationship between the Perception of the Respondents in terms of Clarity and the Posttest Scores of the Experimental Group.

Factor	Experimental (Posttest score)	
	p-value	**Interpretation**
Clarity	0.570	Not Significant

Level of significance = 0.05

4.6.2 Relationship between the Perception of the Respondents in terms of Visual Appeal and the Posttest Scores of the Experimental Group

Based on the results shown in table 4.12, the p-value 0.04 which is less than level of significance of 0.05 means the null hypothesis is rejected. With these results, it implies that there is a significant relationship between the perception of the respondents and the posttest scores of the experimental group. This indicates that the visual appeal of the presentations had a meaningful positive impact on the retention levels of learners in the experimental group, who were engaged in reportorial activities with PowerPoint presentations.

The significant relationship between visual appeal and posttest scores implies that the design and aesthetic quality of PowerPoint presentations play a critical role in enhancing retention in learners. This finding highlights the importance of incorporating visually engaging elements into instructional materials to capture learners' attention and facilitate better understanding and recall. For educators, this underscores the need to prioritize the visual design of teaching tools, ensuring they are not only informative but also visually stimulating to maximize their educational impact.

According to Rajasekaran et al (2020), visual appeal significantly enhances retention levels across various educational contexts. Research indicates that incorporating visuals into educational materials not only increases engagement but also improves comprehension and memory retention. This is particularly evident in studies that the effectiveness of visual aids in both traditional and digital learning environments. According to Clyatt et al (2019) Visuals, such as images and graphics, facilitate better understanding of complex topics by simplifying content.

Table 4. 12. Relationship between the Perception of the Respondents in terms of Visual Appeal and the Posttest Scores of the Experimental Group.

Factor	Experimental (Posttest score)	
	p-value	**Interpretation**
visual appeal	0.04	Significant

Level of significance =0.05

4.6.3 Relationship between the Perception of the Respondents in terms of Ease of Use and the Posttest Scores of the Experimental Group

Based on the results shown in table 4.13, the p-value 0.622 which is greater than level of significance of 0.05. This implies that the null hypothesis which states that there is no significant relationship between the perception of the respondents and the post test scores of the experimental group is accepted. This result suggests that the perceived ease of use of the PowerPoint presentations did not have a measurable impact on the retention levels of the learners in the experimental group.

The lack of significant relationship between ease of use and posttest scores implies that while user-friendly design and navigation may enhance the experience of using PowerPoint, they do not directly influence retention. This finding suggests that learners' ability to retain information relies more on the content quality and delivery method than on the simplicity of the tool itself. For educators, it highlights the importance of focusing on the pedagogical aspects of PowerPoint presentations, such as content clarity, visual appeal, and engagement strategies, rather than solely prioritizing ease of use.

This result aligns with the study of Garashkina & Druzhinina. (2023), that suggests ease of use, while beneficial for reducing distractions and technical barriers, does not independently improve learning outcomes. Effective instructional design that incorporates cognitive engagement strategies can optimize educational activities, particularly in pedagogical training.

Table 4.13. Relationship between the Perception of the Respondents interms of Ease of Use and the Posttest Scores of the Experimental Group.

Factor	Experimental (Posttest score)	
	p-value	**Interpretation**
Ease of use	0.622	Not significant

Level of significance = 0.05

5. Conclusion

This study shows that using PowerPoint presentations in reportorial activities can help improve students' ability to remember information. The significant difference in pretest and post-test scores in the experimental group suggests that PowerPoint presentations are a useful tool for helping students understand concepts. While both the control and experimental groups improved, the experimental group had more students who scored "very good," indicating that PowerPoint presentations may be more effective than traditional teaching methods.

The students' positive perceptions of clarity, visual appeal, and ease of use of the materials used in teaching further support the value of well-designed instructional tools. While these features were highly rated, only visual appeal was significantly related to the post-test scores in the experimental group. This suggests that visual elements may play a crucial role in helping students understand and retain information when combined with innovative teaching methods.

The study suggests that PowerPoint presentations can be a helpful teaching tool when they are designed well and match educational goals. However, their success depends on how they are used in teaching. According to the study of Tavirova., (2023), multimedia tools can improve teaching methods and foster student self-confidence, motivating self-directed learning. Interactive multimedia, which combines various media types, has been shown to positively influence cognitive learning outcomes, particularly in subjects like physics and chemistry (Festiyed et al., 2023). However, despite the engagement benefits, studies indicate that

multimedia presentations alone do not guarantee significant cognitive retention improvements. Effective learning outcomes are often linked to the alignment of multimedia use with established educational theories (Mclean, 2024).

The study revealed that integrating PowerPoint presentations in reportorial activities significantly enhances students' retention and performance compared to traditional teaching methods. Although students perceived the presentations as clear, visually appealing, and easy to use, only visual appeal was found to have a significant impact on their learning outcomes.

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References

[1] Abrol, M. (2023). Scope and Challenges of Multimedia in Education Sector. International Journal for Multidisciplinary Reaserch, 5(3). https://doi.org/10.36948/ijfmr.2023.v05i03.3868
[2] Addimando, Federico. (2024). Effective Communication Strategies. SpringerBriefs in psychology, doi: 10.1007/978-3-031-53606-9_4
[3] Agisni, Akbar., Dewi, Novari., G., Leander., Bintang, Unggul, Prawirawan., Amir, Hamzah, Pohan. (2023). The effectiveness of multimedia learning: A study on student learning. Priviet Social Sciences Journal, doi: 10.55942/pssj.v3i7.215
[4] Anigbo, L.C., & Ebuoh, C.U. (2019). An analysis of the relationhip Between PowerPoint Instruction and Students' retention Score in Cumputer Science (Database Management System) in College of Education in Rivers State. Journal of Education and practice, 8(36):78-82.
[5] Aprilia, Clarisa. (2024). Cognitive Learning Theory: Skill Acquisition and Conditional Knowledge. doi: 10.62872/0y4sm303
[6] Azamjonovna, H.M. (2023). The Methodology for using Visual Aids in Teaching Foreign Languages. https://doi.org/10.5281/zenodo.8416869
[7] Bandura (2010). Social learning theory Vol.1). Englewood Cliffs, NJ:Prentice-hall. https://www.simplypsychology.org/self-efficacy.html
[8] Barnett-Itzhaki, Zohar., Dizza, Beimel., & Arava, Tsoury. (2023). Using a Variety of Interactive Learning Methods to Improve Learning Effectiveness: Insights from AI Models Based on Teaching Surveys. Online learning, doi: 10.24059/olj.v27i3.357
[9] Clyatt, Emily, Elisa, Shackelton., Laura, L., Bellows. (2019). The Impact of Visuals on Nutrition and Health Education Materials. dia Communication Courses.
[10] Dewi, T., Kareviati, E. & Siliwangi, I. (2021). The use of PowerPoint as the instructional media teaching English for young learners. Professional journal of English, 4(4), 617-61.
[11] Festiyed., Hermalina, Daulay., M., Ridhatullah (2023). Influence of Interactive Multimedia Teaching Materials on Cognitive Learning Outcomes of students in Science Lessons: A Meta- Analysis. JPPIPA (Jurnal Penelitian Pendidikan IPA), doi: 10.29303/jppipa.v9i8.2693
[12] Garashkina., N.V., & Druzhinina, A.A. (2023). Cognitive Engagement Involvement as a Basis for Designing the Educational Process in the Preparation of Students of Pedagogical Directions. Vyssee obrazovanie v Rossii, doi: 10.31992/0869-3617-2023-32-1-93-109
[13] Garvasiuk, O.V., Namestiuk, S.V., Tkachuk, S.S., Guz, L.O., Ya, A., Velyka., & Lapa, G.M. (2023). The effectiveness of interactive methods in the educational process. Клінічна та експериментальна патологія, doi: 10.24061/1727-4338.xxii.2.84.2023.13
[14] George Siemens And Stephen Downes (2005). George, Siemens., Jurgen, Rudolph., Shannon, Tan.(2020). "As human beings, we cannot not learn". An interview with Professor George Siemens on connectism, MOOCs and learning analytics. Doi; 10.37074/JALT.2020.3.1.15
[15] Glaser, M., & Schwan, S. (2020). Combining verbal and visual cueing: Fostering learning pictorial content by coordinating verbal explanations with different types of visual cueing. Instructional Science, 48, 159-182
[16] Hu, (2022). Development of an Interactive PowerPoint Presentation Design Training Package (IPPDTP) for Lecturers of Tertiary Institutions. International Journal of Technologies in Learning, 28(2):39-62. DOI: 10.18848/2327-0144/CGP/v28i02/39-62
[17] Ishartono, Naufal., Adi, Nurcahyo., Suliadi, Sufahani., Asyifa, Nur, Afiyah. (2022). Employing PowerPoint in the Flipped-Learning-Based Classroom to Increase Students' Understanding: Does It Help? Asian journal of university education, doi: 10.24191/ajue.v18i3.18952
[18] Johnson, B. And Smith, C. (2020). Visual design principles and learner retention design principles and learner retention in PowerPoint presentations. Journal of Instructional Design,32(2),45-61
[19] Long, N., & Van, L.H. (2023). Enhancement of EFL learners' lexical retention: The role of social constructivism. Cogent Education. https://doi.org/10.1080/2331186X.2023.2223811
[20] Malechko Tetiana., Тетяна, Шарова., Halyna, Kolomoiets. (2024). The Use of Interactive Teaching Methods in Educational Institutions. Problemi osvìti, doi: 10.52256/2710-3986.2-101.2024.15
[21] Mayer, Richard. (2024). The Past, Present, and Future of the Cognitive Theory of Multimedia Learning. Educational Psychology Review, doi: 10.1007/s10648-023-09842-1
[22] Mclean, A. L. (2024). The mirage of multimedia: Dissecting engagement and learning in healthcare education. Medical Education,https://doi.org/10.1111/medu.15304
[23] Miller, G.A. (1950). The magical number seven, plus or minus two: some limits on our capacity for processing information. Psychological review, 63, 81-97.

[24] Mohammed, S. H., & Kinyó, L. (2020). The role of constructivism in the enhancement of social studies education. 7(7), 249–256. http://www.jcreview.com/?mno=106774.
[25] Mufti, Rahajeng., Nadifa., Fajar, Pradana., Fitra, A., Bachtiar. (2024). Evaluation of Usability in LetsCode Digital Learning Media Using the Usability Testing Method and Use Questionnaire. JITeCS (Journal of Information Technology and Computer Science), doi: 10.25126/jitecs.92599
[26] Onah, E.N, Onah, O., Obe, P.I & Ude, V. C., (2021). Perception of Enugu state basic teachers on use of PowerPoint as innovation in teaching during lecture preposition, Delivery and evaluation for sustainable development goals' Attainment. Package Instructional Approach. Pertanika Journals Social Science and Sustainable Development, 151-173
[27] Osman, N., Noor, S.S.M., Rouyan, N.M., & Hat, N.C. (2022). The use of PowerPoint in Developing multimedia-based teaching and learning materials for learning Arabic Language. Journal of Language and Linguistic Studies, 18(1), pp15-21. Doi: 10.52462/jlls.163
[28] Pinto, Yma.(2020). The efficacy of homogenous groups in enhancing individual learning. Journal of Education and practice.
[29] Pirmatov, A., N., Ysmayl, Kyzy. (2024). Use as visualization for multimedia presentations of schoolchildren. doi: 10.69722/1694-8211-2024-58-86-95
[30] Qasserras, Lhoussine. (2024). The role of visual learning aids across diverse learning styles in high school education. European Journal of Applied Linguistics Studies, doi: 10.46827/ejals.v7i2.550
[31] Ramlatchan, M. (2019). Multimedia learning theory and instructional message design. ODU Digital Command, V 1.10 Research,7(3)., http://doi.org/10.18646/2056.73.20-028
[32] Ristyani, A.R, Nurhayati., & Husnussalam., H. (2020). Improving students' interest by using picture media at tk nur assalam. Professional Journal of English Education. 3(1).
[33] Şan, Ismail., Ali, Kiş. (2018). Effect of Traditional Methods in Geometry and Numbers Learning Domains on Academic Achievement: A Meta-Analysis Study. International Journal of Research in Education and Science, doi: 10.21890/IJRES.428950
[34] Sana, Faria., Veronica, X., Yan., Courtney, M., Clark., Elizabeth, Ligon, Bjork., Robert, A., Bjork. (2021). Improving conceptual learning via pretests.. Journal of Experimental Psychology: Applied, doi: 10.1037/XAP0000322
[35] Strauss, J., Corrigan, H., & Hofacker, C. (2019). Optimizing Student Learning: Examining the Use of Presentation Slides. Markwting Education Review, 21(2),151-162.
[36] Tayirova, Muhabbat., Atakhanovna (2023). Advantages and disadvantages of using multimedia technologies in the educational system frontline social sciences and history journal, doi: 10.37547/social- fsshj-03-02-05
[37] Thompson, Robert. (2000). A Passport to Flexible Learning: An Orientation Program Designed To Introduce First Year University Students to Interactive Teaching Technologies
[38] Yaris, S. & Wawanitikit (2019) Problems and pitfalls in PowerPoint presentations. BLDE University Journal of Health Sciences 4(1):43