

UTILIZATION OF POWERPOINT SLIDES AS PRESENTATION MEDIA IN THE LEARNING PROCESS

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Abstract: The rapid development of information and communication technology has brought significant changes to the field of education, especially in the use of digital-based learning media. One of the media widely used in the learning process is Microsoft PowerPoint. This article aims to examine the definition of PowerPoint, its benefits in learning, its strengths and weaknesses, as well as the challenges faced in its implementation within educational environments. The method used in this article is a literature study by collecting various references from books, journals, and relevant previous studies. The results of the study indicate that PowerPoint plays an important role as an interactive learning medium because it can combine text, images, audio, video, animations, and graphics into an attractive and systematic presentation. Proper use of PowerPoint can improve students' motivation, participation, creativity, and learning outcomes. In addition, PowerPoint supports online and hybrid learning that continues to develop in the digital era. However, the use of PowerPoint also has several weaknesses, such as dependence on technological devices and electricity, limited teacher skills in designing slides, and the risk of ineffective presentation designs that may reduce students' concentration. Therefore, digital literacy skills, creativity, and a good understanding of presentation design are needed so that PowerPoint can be utilized optimally in creating effective, innovative, and meaningful learning.

Keywords: PowerPoint, learning media, digital learning, interactive media, educational technology.

INTRODUCTION

The ever-increasing development of information and communication technology has had a major impact on the world of education, especially in the use of digital-based learning media. One of the media most frequently used by educators today is Microsoft PowerPoint. As presentation software developed by Microsoft Corporation, PowerPoint has become a

commonly used learning tool at various levels of education, from elementary school to university.

In the learning process, PowerPoint no longer only functions as a tool to display material visually, but has also developed into an interactive learning medium that is able to combine various multimedia elements, such as text, images, graphics, animation, audio, and video in one systematic display. These developments are increasingly important in the digital era, especially after Covid-19, when online and hybrid learning began to be widely implemented. The latest features available, such as artificial intelligence (AI), live captions, and real-time collaboration, make PowerPoint more capable of meeting the ever-evolving needs of modern learning.

However, the use of PowerPoint in learning also faces various conditions that need to be considered, both in terms of benefits and challenges. The use of creatively and interactively designed PowerPoint can help increase students' motivation, activeness, and learning outcomes in the learning process. However, if it is not used appropriately, for example, the slide display is too full of text, excessive use of animation, or the presentation design is disorganized and has various colors, then this can actually reduce students' focus and understanding of the material being presented. Therefore, a deeper understanding is needed regarding how to use PowerPoint effectively, including its advantages, disadvantages, and challenges in its use so that this media can be used optimally to support quality learning.

Therefore, this article aims to examine in depth the meaning of PowerPoint, its benefits in learning activities, effective usage strategies, its advantages and disadvantages, and the various challenges that arise in its application in educational environments. This study is expected to provide educators with insights into optimizing the use of PowerPoint as an innovative, engaging learning medium that aligns with developments in education in the digital age.

DISCUSSION

A. Understanding PowerPoint

According to Arsyad (2019), PowerPoint is a type of computer-based presentation media that functions as a visual aid in the learning process and in conveying information. This program makes it easier for presenters to organize material

systematically through slides that can be equipped with interactive multimedia elements.

According to Susilana & Riyana (2019), Microsoft PowerPoint is presentation software developed by Microsoft Corporation, which allows users to create professional slideshows by combining text, images, graphics, animations, audio, and video in one structured and attractive display for visual communication purposes.

According to Purnomo & Wahyuni (2024), Microsoft PowerPoint is a digital presentation application that not only functions as a conventional teaching aid, but has developed into an interactive content creation platform. With the latest features like AI integration, live captions, and real-time collaboration, PowerPoint now supports hybrid and distance learning more comprehensively.

Interactive PowerPoint is a media that can make it easier for users to get information and knowledge from the media. Interactive PowerPoint media is an interactive slide that contains learning materials so it can be used as a medium in learning. The difference between the regular PowerPoint presentations generally used and interactive PowerPoint is that interactive PowerPoint is able to attract students to participate in learning activities. An attractively designed display will encourage students to focus more and be more interactive. Microsoft PowerPoint is presentation software developed by Microsoft and is widely used as a medium for conveying visual information. This application provides various features such as slide arrangements, design templates, graphics, multimedia, animations, and transitions that allow users to organize presentations systematically and attractively. PowerPoint functions as a communication tool that supports the delivery of ideas, data, and information in visual form, making it easier for the audience to understand the material presented (Ramli, 2025).

The advantage of Microsoft PowerPoint lies in its ease of use and flexibility in adapting to user needs. With the right mastery of features, PowerPoint can be an effective visual communication tool to clarify material, emphasize important points, and increase the appeal of a presentation. However, inappropriate use of PowerPoint, such as excessive use of animation or inconsistent layout, can actually interfere with students' understanding. Therefore, the use of PowerPoint needs to be supported by an

adequate understanding of presentation design and digital literacy (Hutabarat & Raikhapoor, 2025).

So it can be concluded that Microsoft PowerPoint is a computer-based presentation application that is used as a visual medium to help the learning process and convey information. PowerPoint allows users to organize material systematically and attractively through a combination of text, images, graphics, animation, audio, and video. Besides being a presentation tool, PowerPoint has also developed into an interactive learning medium that supports modern learning, including hybrid and distance learning.

B. Benefits of PowerPoint in Learning

PowerPoint can be utilized in several ways to maximize the effect achieved. According to Hashemi et al (2012), there are several stages in learning that can utilize PowerPoint to achieve the expected targets, namely:

1. PPT as a medium to introduce material

PPT is quite effective for introducing new theories or concepts. Explanations in PPT should use short, clear words or sentences, and choose simple and common words so that they are easy to understand. Explanations in PPT should use short, clear words or sentences, and choose simple and common words so that they are easy to understand. This needs to be taken into account to avoid misunderstandings when the explanation is given.

2. PPT as a medium for practicing questions and "drilling"

PPT for practice questions and “drilling” is very beneficial because this material can be used repeatedly. Apart from that, this application can also be used as a game medium in learning. Games can be created by teachers using PowerPoint.

PPT can be a medium for reviewing material that has been given to students. The available features allow a teacher to structure the material in a more interesting way and make students more enthusiastic about studying the material. Presentations using PowerPoint are also a great way to see if the concepts being taught have been mastered well.

3. PPT to give quizzes to students

Quizzes or exercises can be given using PPT media. One example is a quiz to assess students' vocabulary mastery. The vocabulary to be tested can be inserted into a slide and students are asked to guess what words are shown within a certain time interval. This method is quite interesting and challenging for students.

The limited communication between teachers and students during online learning requires teachers to be creative and modify PPT to create interactive PowerPoint slide designs that are attractive, unique, and able to convey material clearly and easily understood by students.

Some things that can be done are:

- a. Provide an interesting, short, concise title that makes students interested in finding out more about the content of the material that will be presented.
 - b. Choose a slide design before creating the content. Choosing the right font, theme color, background, and text is also important for creating harmony and balance in the design. Also pay attention to the contrast between the background color and the text so that it is not too striking.
 - c. Also pay attention to the contrast between the background color and the text so that it is not too striking. Helvetica and Arial are quite interesting font types. Avoid choosing fonts that are too narrow to make them easy to read. The size of the spacing must also be considered so that the distance between sentences looks neat and pleasing to the eye.
 - d. Don't use too many slides, adjust them to your needs.
 - e. Use appropriate graphics and images that are appropriate to the material being presented. Don't put too many images on a slide so it doesn't look too crowded. Using graphs or tables in slides will also provide added value. And check the spelling and grammar again and make sure it meets the correct and acceptable language rules on the slides that have been completed.
4. Increasing the Effectiveness of Material Delivery in Online Learning

Rahmawati, Badarudin, and Hadi (2020) stated that interactive PowerPoint media has proven effective in supporting the delivery of material from teachers to students, especially in the context of online learning. The results of their research

showed that the average score of students who used this media exceeded the set KKM score.

5. Supporting Adaptive Learning in the Digital Era

Sari and Lestari (2020) emphasized that the development of interactive PowerPoint media has been proven to improve student learning outcomes at the elementary school level, especially in Civics subjects. This media provides a more meaningful learning experience compared to conventional approaches.

C. Advantages of PowerPoint

The following are the advantages of Powerpoint according to Widyawati and Prastowo (2025), including:

1. Make Learning Student-Centered

PowerPoint functions as a medium not only to convey material, but as a medium that allows students to be actively involved, explore, and organize their own learning process. Students engage themselves as users of technology and not just as spectators, so PowerPoint becomes a platform for students to express understanding, explore creativity, and be directly involved in the learning process. This condition encourages the creation of meaningful learning because students do not just receive information, but also actively construct their own knowledge through exploring animation features, slide designs, and compiling visual content that suits their individual learning styles.

2. Creating Educational Interactions between Teachers and Students

The implementation of PowerPoint in elementary schools is no longer only used to convey information, but also as an interactive media that encourages active student participation in the learning process. The use of PowerPoint has proven effective in increasing student participation during learning, thus making students more involved and interested in the material being taught. . Two-way interaction between teachers and students becomes more lively because the slides displayed through the projector contain interesting images, interactive questions, and visual content that stimulates students' curiosity. Teachers also find it easier to deliver material

because students are more focused and enthusiastic about participating in the learning.

3. Supports a Variety of Media and Teaching Methods

PowerPoint media offers a wide variety of uses such as text, images, graphics, animations, and even videos. PowerPoint offers enormous flexibility in adapting various learning methods to suit students' needs. With its various features, PowerPoint allows teachers to present material in a more varied way and according to various student learning styles. This is very beneficial because in one class there are students with various learning styles, such as visual, auditory, and kinesthetic, so by combining text, images, audio, and animation in one presentation, the learning needs of all students can be accommodated simultaneously.

4. Facilitates Visual Understanding of Material

An attractive PowerPoint presentation is one of the reasons why PowerPoint is said to be an effective learning medium, because there is a play of colors, letters, and animations, both text animations and image or photo animations. This will further stimulate children to find out more information about the teaching materials presented by the teacher. Visual information messages are easier for students to understand and absorb learning materials. This visual approach is very helpful, especially in conveying abstract concepts that are difficult to understand if only conveyed verbally, such as the water cycle, chemical processes, or mathematical concepts that require graphical representation to be concrete.

5. Optimizing Available Learning Resources

The availability of adequate facilities and infrastructure such as computers, projectors, and internet access provides opportunities for teachers to make maximum use of PowerPoint in learning. By utilizing the visual, animation, and graphic features in PowerPoint, teachers can convey material in a more interesting and interactive way, thereby helping students understand more complex concepts. PowerPoint is the easiest medium to implement because it is compatible with almost all hardware commonly available in schools, such as computers, laptops, and projectors, without requiring expensive additional software.

6. Encourage Student Creativity and Expression

Giving students the opportunity to design and present materials using PowerPoint allows them to deepen their understanding, develop their creativity, and actively engage in the learning process. When students are given the opportunity to create their own presentations, for example designing slides about the water cycle in their own style, they indirectly practice critical thinking, managing information, and communicating ideas visually. This creative process makes learning much more meaningful because students have ownership over their work.

7. Effective Solutions for Schools Facing Limitations of Conventional Learning

PowerPoint can be a solution for elementary schools that still face problems regarding students' lack of understanding and involvement in learning. Microsoft PowerPoint is used as an interesting communication medium so that students do not feel bored with the learning atmosphere because the teacher always provides a learning atmosphere with learning media that are constantly different. In this context, PowerPoint serves as a bridge between conventional learning, which tends to be monotonous, and modern, interactive learning, without requiring large technological investments or complex technical training.

D. Disadvantages of PowerPoint

The following are the shortcomings of Powerpoint according to Ramadhani et al. (2024), including:

1. Color Display Is Not Always Appropriate

There are several shortcomings in using PowerPoint, namely the color display is not appropriate. This happens because the colors seen on the computer monitor screen when creating slides do not always appear the same when projected in front of the class using a projector. Differences in color calibration between devices can cause slides to appear too dark, faded, or too contrasty, disrupting students' visual comfort when listening to the material.

2. Time Limitations in Showing PowerPoint in Class

One of the drawbacks is the lack of time to present PowerPoint in front of the class, which is influenced by the lengthy installation process. Technical preparations such as connecting the laptop to the projector, loading the presentation file, adjusting the screen display, and ensuring all devices are functioning properly

require considerable time. As a result, the effective time allocation for learning activities is reduced, especially if sudden technical problems occur such as incompatible cables or problematic projector drivers.

3. Not all students understand the material through PowerPoint.

There are some students who do not understand learning through the use of PowerPoint. This shows that PowerPoint is not universal as a learning medium that is suitable for all students. Students with a kinesthetic learning style who require hands-on practice, or students who have difficulty concentrating on excessive visual stimuli, may not benefit optimally from PowerPoint-based learning. In addition, if the text in the slides is too dense or there are too many animations, students can actually experience cognitive overload which hinders understanding.

4. Dependence on Technology and Electrical Devices

The use of PowerPoint is highly dependent on the availability of hardware such as laptops, projectors, and a stable power supply. The use of PowerPoint media is less effective in learning because it causes a lack of student concentration during the learning process. If there is a power outage, projector damage, or the laptop cannot be turned on, the entire PowerPoint-based learning plan can be disrupted or even cannot be implemented at all. This condition is a significant weakness in schools whose technological infrastructure is still limited.

E. Challenges of Using PowerPoint

The following are the challenges of using PowerPoint according to Lestari et al. (2024), including:

1. Lack of Teacher Skills and Creativity in Operating PowerPoint Features

The skills and creativity possessed by teachers in selecting and using learning media must be adapted to the needs of the material to be conveyed. Based on the field data obtained, it was found that teachers' skills and creativity in using Microsoft PowerPoint learning media still experience obstacles, especially at the stage of designing the media. Teachers are still not proficient in using PowerPoint's features. They struggle to select appropriate templates for the material, add audiovisual elements, organize animations, and integrate images and videos into

slides appropriately. As a result, the resulting slides tend to be simple, less engaging, and unable to maximize PowerPoint's potential as an interactive medium. This condition has caused some teachers to eventually return to conventional methods which are considered easier and do not require special technical skills.

2. Limited Time to Design and Prepare Presentations

The many activities that teachers have to carry out in a short duration often make teachers overwhelmed in completing their tasks. Lack of time affects the preparation of teaching materials, both those that are being planned and adjustments to the time when they are being implemented. Teachers admit that using PowerPoint requires them to have a lot of time to create it, because their busy schedules make it difficult to set aside special time to design presentations. Designing a set of slides that are well-designed, engaging, and aligned with learning objectives requires a significant investment of time, from gathering materials, selecting designs, adjusting animations, and revising. Meanwhile, teachers' workloads are already overwhelming, ranging from teaching, correcting student assignments, managing administration, attending training, and even personal responsibilities. As a result, PowerPoint presentation preparation is often rushed or even abandoned.

3. Difficulty in Operating Supporting Equipment

Difficulties in operation are defined as the use of supporting tools in the use of PowerPoint media such as LCD projectors, sound systems, and others which often experience problems such as the tool not turning on or incorrect cable installation. This is what causes learning activities not to run as they should. Apart from installation on the projector, teachers also experienced problems with supporting devices such as the sound system which was difficult to connect, so the sound could not be heard. This kind of technical problem really disrupts the smooth learning process because teachers are forced to spend valuable time just to deal with hardware problems in front of the class. This situation not only disrupts student concentration but also reduces teacher confidence. The complexity of using these supporting devices is often cited as a reason for teachers to choose conventional media, which are considered more practical.

4. Ineffectiveness of Learning Duration

Sometimes teachers only focus on PowerPoint, because the material presented is not interesting so that other materials are not conveyed because a lot of time is used. The duration of learning time must also be adjusted to the delivery of the material, so teachers must pay attention to the duration of each slide when using PowerPoint media. This problem occurs when the teacher is not careful in managing the distribution of time for each slide, so that one topic is discussed for too long while the next topic does not have time to be delivered. In conditions like this, the use of PowerPoint is actually counterproductive because instead of increasing learning efficiency, this media actually slows down the pace of material delivery and reduces the scope that students should learn in one meeting.

5. Limited Time, Cost, Knowledge, and Internet Network

There are six problems experienced by teachers in using Microsoft PowerPoint as a multimedia-based learning medium, namely:

- a) time constraints;
- b) difficulty in operating it;
- c) age;
- d) quite expensive costs;
- e) lack of knowledge; and
- f) network constraints.

The age factor of teachers who are no longer young is an obstacle in itself because adaptation to technology tends to be slower than the younger generation. The cost of purchasing equipment like laptops, projectors, and a decent sound system is also not always affordable for all schools, especially in remote areas. Meanwhile, to download engaging templates, high-quality images, or supporting videos, teachers need a stable internet connection something that remains a luxury in many schools in Indonesia.

6. Obstacles in Customizing Colors and Visual Design of Slides

Provide two reasons regarding the obstacles experienced by teachers in using Microsoft PowerPoint as a learning medium, namely the difficulty of teachers in

adjusting the background color and text, and the time constraints needed to design the PowerPoint media. Choosing the right color combination between the slide background and text and other visual elements is a design aspect that is often overlooked but has a big impact on students' readability and visual comfort. Colors that are too bright, lack contrast, or text that is too small can make it difficult for students to read and absorb information from slides. The inability of teachers to design good visual designs results in PowerPoints that are less communicative.

CONCLUSION

Based on the discussion above, it can be concluded that Microsoft PowerPoint is a technology-based presentation media that has an important role in supporting the modern learning process. PowerPoint not only functions as a visual aid, but has also developed into an interactive learning medium that is able to integrate various multimedia elements such as text, images, graphics, animation, audio, and video in one attractive and systematic display. The presence of various new features makes PowerPoint increasingly relevant for use in face-to-face, online, and hybrid learning.

In practice, PowerPoint offers numerous benefits to the learning process, such as helping clarify material delivery, increasing student motivation and participation, facilitating visual conceptual understanding, and supporting a variety of more creative and interactive learning methods. Furthermore, PowerPoint can be used as a medium for practice questions, quizzes, and learning evaluations, making learning more engaging and less monotonous.

PowerPoint also has several advantages, including creating more student-centered learning, enhancing educational interactions between teachers and students, supporting creativity, and optimally utilizing digital learning resources. However, PowerPoint also has several disadvantages, such as dependence on technology and electrical devices, limited time for presentation preparation, and the potential for difficulty understanding if slide designs are inappropriate or excessive use of animations and text.

In addition to these shortcomings, teachers also face various challenges in utilizing PowerPoint, such as limited technological skills, lack of time to design learning media, technical constraints with supporting devices, and inadequate internet connections and

school facilities. Therefore, digital literacy skills, creativity, and ongoing training are needed for educators to use PowerPoint effectively and appropriately for learning needs.

When used appropriately, PowerPoint can be an innovative, interactive, and adaptive learning tool for developments in educational technology. The use of attractive design, structured materials, and balanced feature management will help create a more effective, enjoyable, and meaningful learning process for students.

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