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PRACTICE-BASED ARTICLE

Empowering elementary teachers through audio-visual media training with Microsoft PowerPoint

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ABSTRACT

This community service program aims to improve the pedagogical competence of teachers at SD Negeri 4 Bireuen through training on the use of Microsoft PowerPoint as an interactive and effective teaching medium. The activity includes the delivery of relevant information and direct hands-on training to classroom teachers, focusing on the development of simple animations and audio-visual teaching materials using PowerPoint. The lecture method was used to introduce the concept and importance of interactive learning media in the teaching and learning process. This was followed by practical sessions and a question-and-answer segment to clarify any unresolved issues. The results indicate an increase in teachers' understanding and knowledge of instructional media, as well as improved skills in creating simple animations and audio-visual teaching content using Microsoft PowerPoint.

KEYWORDS

Community service, teacher training, PowerPoint, audio-visual media, instructional technology

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1. Introduction

Advances in information and communication technology have been widely applied in the teaching and learning process, with the aim of enhancing the quality of education in line with technological progress. The development of multimedia technology offers great potential to transform the way individuals learn, access, and adapt information. Educational technology is expected to address various challenges in education, such as overcoming the shortage of teachers to meet the learning needs of a rapidly growing society, and helping students master extensive knowledge both individually and collaboratively. This ensures that learning can take place more effectively and efficiently.

Teachers, as the main facilitators of learning, play a crucial role in determining the success of education in schools. Effective learning requires careful planning and preparation, particularly in selecting and developing appropriate learning media. One of the most frequently used tools in teaching is Microsoft PowerPoint, a presentation

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application designed to help educators clearly convey ideas and materials. This tool enables teachers to present their lessons in a way that is more interactive and engaging, which is particularly important for elementary school teachers in creating an appealing learning atmosphere for young learners.

However, observations at SD Negeri 4 Bireuen indicate that the potential of computer software in learning has not been fully optimized. Many teachers are not yet skilled in developing computer-based learning materials and require training and guidance to improve their ability to integrate technology into the learning process. In particular, there is a need for professional development in creating effective presentations using interactive media such as Microsoft PowerPoint.

This community service program aims to equip teachers at SD Negeri 4 Bireuen with the skills to use Microsoft PowerPoint as an interactive and effective learning medium. The training is expected to provide teachers with the knowledge and practical skills needed to develop engaging presentations, including the creation of simple animations for classroom use. By mastering these skills, teachers can create more dynamic, enjoyable, and impactful learning experiences for their students.

2. Literature review

2.1. Learning media

Learning media are physical tools used to deliver instructional content, including books, tape recorders, cassettes, video cameras, slides, photos, graphics, television, and computers (Gagné & Briggs, 1974). In other words, they are components of learning resources or physical means that contain instructional material in the student's environment and can stimulate learning. Learning media act as a channel for delivering messages to students, designed in a planned manner by the source to create a conducive learning environment in which learners can process information efficiently and effectively.

The use of media in learning provides many benefits, such as generating new interests, stimulating motivation, creating psychological engagement, and supporting the presentation of data in an attractive and reliable manner. Learning media also help improve comprehension, facilitate data interpretation, and condense complex information (Nurhalimah & Azzahra, 2023).

2.2. Microsoft PowerPoint as a learning medium

Microsoft PowerPoint, a presentation software included in the Microsoft Office suite, is widely accessible and adaptable for educational purposes (Wulandari et al., 2024).

Although originally designed for presentations, its features can be utilized to develop engaging learning programs through the integration of text, images, audio, and video.

Text can be inserted via the "Insert Text Box" function, images can be uploaded from files or clip art, and multimedia elements such as sound and video can be embedded to enrich content and foster interactivity. Its design capabilities, including customizable backgrounds, textures, images, and animations, enhance visual appeal and present information dynamically, thereby increasing student interest and engagement. Additionally, hyperlinks can be embedded to connect presentations to other files or online resources, enabling interactive navigation and access to authentic learning materials. Empirical studies have demonstrated that multimedia-based PowerPoint presentations can improve both motivation and learning outcomes. For instance, Serly et al. (2023) found significant improvements in elementary students' science learning performance and motivation, while Ajis et al. (2023) reported that students using multimedia PowerPoint achieved higher test scores compared to a control group.

3. Methods

The service activities were conducted at SD Negeri 4 Bireuen from May 10 to 17, 2025. The implementation process lasted one week, beginning with the activity licensing stage, followed by socialization with teachers regarding the objectives of the program. The target participants were classroom teachers. The initial stage involved contacting the school principal to explain the purpose, background, and objectives of the program, gathering suggestions and feedback, providing information on the activity schedule, and preparing the necessary equipment and materials.

In the implementation stage, training sessions were provided to classroom teachers at the agreed time and location. These sessions consisted of delivering information and offering hands-on training on using Microsoft PowerPoint to create animations and audio-visual teaching materials. The final evaluation stage took place at the end of each session to assess the teachers' understanding and skills. The training aimed to enable teachers to effectively use PowerPoint as an engaging learning medium, fostering student creativity. The success of the program was measured by positive teacher feedback and the improvement of their ability to operate PowerPoint, as demonstrated in practical exercises conducted at the end of each meeting.

4. Results

This community service activity was organized based on previous research findings and the needs of elementary school teachers to develop their pedagogical competence, particularly in improving teaching methods through various learning media.

The activity was attended by 15 class teachers and was held from May 10–17, 2025, in the teacher's room of SD Negeri 4 Bireuen. The training began with a presentation of material by the service team, followed by hands-on practice by the teachers. Training materials included an introduction to and utilization of basic PowerPoint features, creating animations, and developing audiovisual teaching materials. The delivery of materials was integrated with interactive question-and-answer sessions.

Figure 1. PowerPoint training session for elementary school teachers

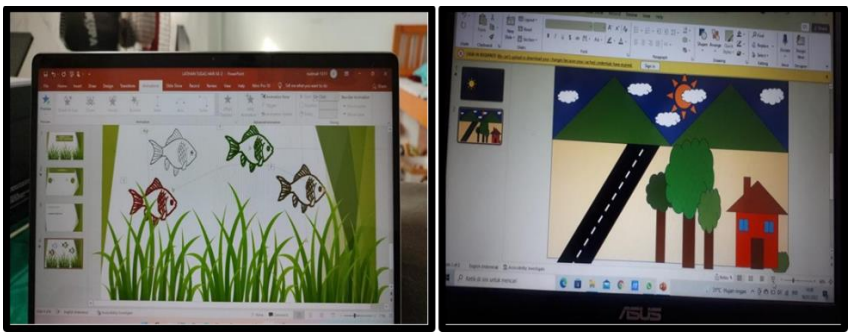

Figure 2. Animation created by a teacher using PowerPoint

In general, this activity was carried out successfully. The training stages included presentations, demonstrations, and practice sessions that enabled teachers to produce their own teaching media. As illustrated in **Figure 1**, the training session provided opportunities for teachers to directly explore PowerPoint's interactive features for educational purposes. Furthermore, the workshop produced various outputs, including animated teaching slides, as shown in **Figure 2**, which displays an example of an animation designed by one of the participants.

5. Discussion

The initial preparation for the activity involved designing an appropriate training model. Several discussions were held between the service team and the school, resulting in an agreed activity plan. The implementation of this community service activity met the service team's targets in terms of participant numbers, expected outcomes, and smooth

evaluation processes. Although there were challenges in scheduling and securing a venue, these were resolved through collaboration among all stakeholders (Smith & Doe, 2022).

Evaluation of the training was conducted through observation, practical assignments, and interviews. Teachers' ability to produce interactive learning media using PowerPoint demonstrated their understanding of the basic features and application of the software. This aligns with previous studies that found technology-based media training enhances teachers' skills and creativity in lesson delivery (Rahman et al., 2021; Sari et al., 2025; Santi & Kasir, 2024).

Participants' enthusiasm was evident from the early planning stages, driven by their need to enrich and develop knowledge about learning media. Prior research also highlights that training programs tailored to teachers' needs significantly improve their motivation and adoption of new instructional strategies (Johnson & Clark, 2020; Lee, 2019). In this case, the service activity not only addressed the immediate technical skills but also fostered collaborative learning among teachers, which is crucial for sustainable pedagogical development (Budianto et al., 2023; Faradilla et al., 2024; Sylvia et al., 2024).

6. Conclusion

This community service activity has provided valuable insights and knowledge to teachers regarding the use of PowerPoint applications as interactive learning media that can be developed and applied in classroom teaching and learning activities. The training not only improved teachers' understanding of the software's features but also enhanced their ability to design engaging and effective instructional materials.

Following this activity, teachers are expected to further develop their skills in creating computer-based learning materials, enabling them to design various interactive media that support classroom instruction. Schools are encouraged to provide adequate facilities and foster a supportive environment that promotes the continuous improvement of teachers' competencies, particularly in the application of computer-based learning. Such efforts will contribute to the enhancement of both teacher professionalism and the overall quality of the learning process.

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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