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Assistance enhances the motivation of teachers and students through the introduction of multimedia-based learning at SMP Negeri 12 Torgamba

Vinny Tryandini [a], Pristiyono [b], and Meisa Fitri Nasution [c]

Labuhanbatu University, North Sumatra, Indonesia

[a] Corresponding author: vinnyhrp7@gmail.com
[b] paktio16@gmail.com
[c] meisa.fitri@gmail.com

ABSTRACT

In creating engaging learning experiences, educators need skills in using digital media in teaching. One effort that can be implemented to address the conditions present in the school environment during this era of advancing digital technology, and to attract students' interest in learning, is designing and developing multimedia-based instructional media. To achieve this objective, it is necessary to conduct training and provide assistance to educators. This training is conducted by introducing and offering tutorials on the use of Microsoft Office software and educational film screenings. The results of this community service include improved understanding among educators regarding the development of multimedia-based instructional media, enhanced ability to apply software in creating learning materials through discussions and Q&A sessions, and increased student interest in the teaching and learning process at school.

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INTRODUCTION

The development of multimedia-based technology continues to have a positive impact on the advancement of education in various countries that are highly responsive and open to utilizing technology in teaching and learning. In general, the benefits of multimedia learning include making the learning process more engaging and participatory, reducing learning time, improving the quality of student learning, and increasing students' interest and motivation to learn (Tulhulterul et al., 2023).

Multimedia-based learning is one of the implementations of Sustainable Development, namely Quality Education. Indonesia is a large country that is highly concerned with improving the quality of education and learning, where the Government, through the Ministry of Education, strives to create policies that are directed toward the quality of education and learning. The use of multimedia in education and learning can help students learn more effectively and efficiently, as well as use their time more effectively and efficiently (Haleem et al., 2022).

The application of digital technology has brought about many changes in education and learning, yet it remains a topic of debate and concern among the public, particularly parents, students, and teachers, regarding whether technology has truly transformed education as claimed by many parties. The implementation of digital technology varies based on the socio-economic level of the community, the competence and readiness of teachers, the level of education, and the country's income level (Hennelly & Ctori, 2022).

Although the presence of technology provides and brings convenience to users, in reality, not everyone is able to adapt to the application of technology in human life (Hulng Kee & BLasher Rulblel, 2021). This also applies to the implementation of multimedia-based learning in the field of education, where some are able to accept it well, while others are reluctant to implement it due to a lack of understanding of the practical use of technology (Gkrimpizi et al., 2023). Indonesian society is open to information, but information related to the improvement of learning and educational quality is still often overlooked ("Promise Edulc. Indones.," 2020); (Pramana et al., 2021).

Based on a situational analysis conducted alongside the implementation of the National Teaching Campus Program organized by the Ministry of Education and Culture and assigned to SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra, the program provides an opportunity for university students to gain teaching experience outside the campus and to help support academic progress at the assigned school. Therefore, in that moment, the author, in collaboration with the Field Supervisor Lecturer, developed a community service program focused on assisting in introducing multimedia-based education and learning.

Through the Teaching Campus (Indonesian: Kampus Merdeka) program, it is expected that students can become facilitators and motivators for the teachers of SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra, to be creative and collaborative in learning by utilizing laptops, YouTube media, and learning applications, thereby providing information to teachers and students so that they can adapt to educational technology. At the same time, this community service activity becomes a way for the school, teachers, and students to collaboratively participate in and support the assistance for the introduction of multimedia-based education and learning.

METHOD

The implementation of the community service and the selection of the school emphasized a mentoring method for the school, teachers, and students during the four-month Teaching Campus activity (September to December 2024) at SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra, specifically located in Bukit Tujuh Village. This mentoring method focused on collaboration and cooperation among teachers with the approval of the Principal; thus, the activity could be acknowledged

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by all relevant stakeholders. The supporting tools for this activity included laptops, internet packages, speakers, and other equipment.

Mentoring in the field of education, referred to as the Participatory Action Research (PAR) method, attempts to shift from identifying and theorizing about other people's problems toward involving the community in jointly producing their own knowledge to generate social action (ULniversity of Reading, 2023). This means that the mentoring activity defines a particular problem and applies information into action as a solution to the defined problem.

Therefore, the implementation of mentoring using the Participatory Action Research (PAR) method includes the following steps:

1. Preparation of learning materials

   The mentor, together with the teachers, conducted joint discussions and opinion sharing, particularly in preparing learning materials. This included involving students and the Principal, as well as determining the subjects that were affiliated with technology or applications.

2. Planning

   The mentor and the teachers carried out planning to identify the gaps and problems related to mentoring for the introduction of digital-based education and learning. This was done by the mentor through socialization with the teachers, followed by a gradual socialization to the students.

3. Action

   The mentor conducted a socialization activity to introduce digital-based education and learning together with the teachers and students. At this stage, responses and a question-and-answer session were expected as the main drivers of successful mentoring.

4. Reflection

   At this stage, the mentor evaluated the activity by asking questions regarding the process and the overall implementation to measure the success of the program and identify areas for improvement. This also made it possible to assess the pretest and posttest results.

5. Evaluation

   The mentor evaluated the entire mentoring implementation to ensure that all documentation and evidence of the activities could be accounted for and reported to the teachers, students, and the Principal.

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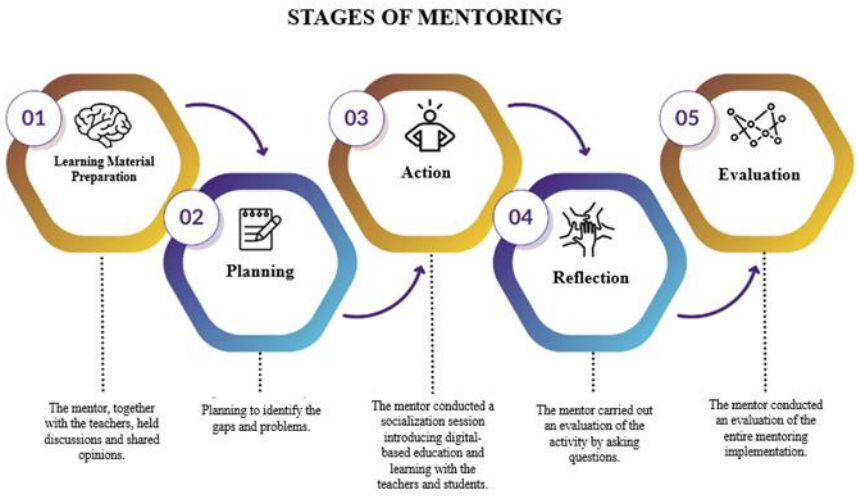

FIGURE 1. Flowchart of Mentoring Implementation

RESULTS AND DISCUSSION

This mentoring activity for teachers and students was carried out as a form of response and adaptation to the development of technology and information, and its impact on the field of education and learning at SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra. Multimedia-based learning introduced through this activity was able to attract students' enthusiasm and interest, as well as increase teachers' spirit in teaching and learning, even amid inadequate facilities such as limited internet access. Therefore, the result of the mentoring conducted during the implementation of the Teaching Campus program is as follows:

FIGURE 2. Discussion and Technical Implementation of Multimedia-Based Learning

From Figure 2 above, it is shown that this discussion activity was carried out to unify differences in opinions and perceptions regarding the mentoring techniques, which were entirely the responsibility of the mentor or the student assigned to the Teaching Campus program at SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra. This resulted in a mutual agreement to ensure the successful implementation of the activity.

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FIGURE 3. Powerpoint Outing Class Material Slides

From Figure 3 above, it is shown that the orientation carried out by the student (mentor) was conducted simultaneously regarding the introduction of multimedia-based education and learning. In this orientation, the mentor explained in detail the definition and meaning of multimedia-based learning to the teachers and students of SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra by presenting the information using a laptop.

FIGURE 4. Mentoring Practice or Action

Figure 4 above shows multimedia-based education and learning activities for students both inside and outside the classroom. The mentor introduced multimedia-based learning methods by utilizing various information media, technology, the internet, and social media related to learning content, as well as introducing learning applications such as Canva, YouTube, and others. This mentoring activity was also attended by the teachers and students of SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra, so that this multimedia-based learning could attract students' interest to become more enthusiastic in learning and encourage teachers to be more creative in teaching students.

In evaluating this mentoring activity, it is necessary to conduct an assessment by asking questions about the process and overall implementation to measure the success of the program and identify areas that need improvement, so that the pretest-posttest process can be understood. The results of the pretest-posttest comparison for this mentoring activity assessment are presented descriptively as follows:

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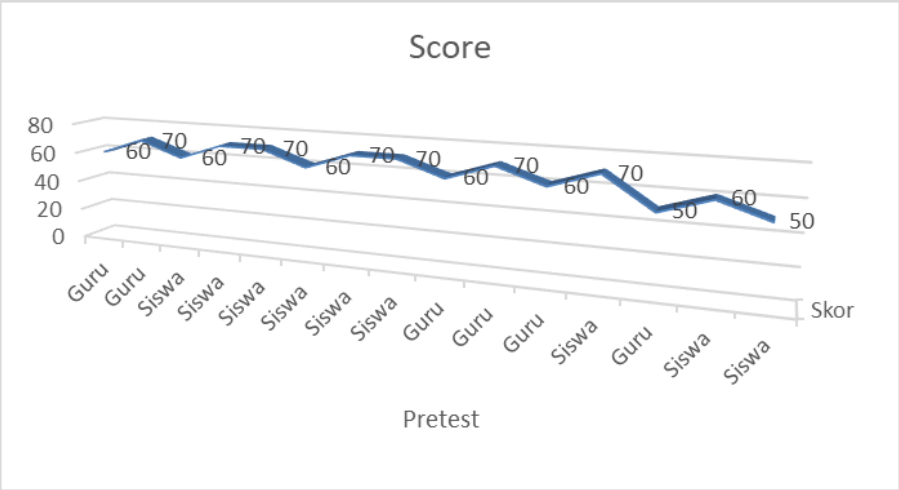

FIGURE 5. Pretest Results

Based on the results of Figure 5 above, it can be concluded that all participants completed a pretest before the implementation of the activity to assess their level of understanding and knowledge regarding the introduction of multimedia-based learning. From the pretest results of 15 participants, consisting of 6 teachers and 9 students of SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra, the mentor found that the participants' literacy on multimedia-based learning already had a strong foundational understanding, and some teachers had already implemented multimedia-based collaborative learning. From the findings in the field during the pretest, it was observed that motivation and support from the leadership still needed to be improved so that all parties would become more aware that the enhancement of multimedia-based learning significantly influences the learning outcomes of both teachers and students. A study stated that the role of leadership in changes to the education system is very important in the era of digitalization (Torres, 2024). Subsequently, the mentor conducted a comparison between the pretest and posttest results as an effort to determine the level of success of this activity, so that information and conclusions could be obtained and serve as important notes in this community service report. The results of the posttest implementation can be seen below:

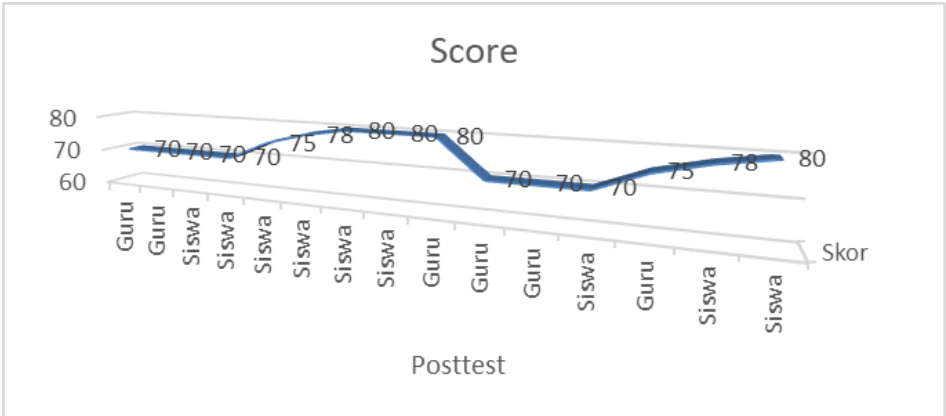

FIGURE 6. Posttest Results

Based on the results of Figure 6 above, it can be concluded that all participants showed an increase in their level of understanding and knowledge regarding the introduction of multimedia-based learning in the posttest. This improvement occurred because the mentoring was carried out with full commitment, starting from the preparation phase to the entire mentoring process, in collaboration with the teachers and students, to enhance their motivation in multimedia-based learning, with the most fundamental motivation being the desire to learn. In addition, the role of leadership, such as the Principal of SMP Negeri 12

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Torgamba, Labuhanbatu Selatan Regency, North Sumatra, served as a key factor in ensuring that both teachers and students maintained their engagement. The posttest scores were used by the mentor as a consideration to evaluate that the series of community service activities and the method applied had been properly implemented, successfully identifying problems and providing solutions.

In improving multimedia-based education and learning in the current context, it is very important for SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra, and for schools across Indonesia. The condition identified from this activity is the need for motivation and commitment from all parties to collaborate in enhancing learning by adapting to technological developments or applications that can support the learning process (Zamiri & Esmaeili, 2024). Multimedia-based learning enables both students and teachers to become more responsive and quicker in obtaining information (Almulfarreh & Arshad, 2023). The knowledge and literacy level of teachers and students, such as how to learn mathematics effectively and which learning content can be adopted, are examples that show how the use of smartphones by teachers and students can become more beneficial (Romulaldi et al., 2023).

CONCLUSION

Multimedia-based education and learning is not something difficult to implement and apply in the field of education in Indonesia, especially at all levels. Schools should serve as proper places to filter information and manage changes, particularly those related to integrated learning methods and models. Schools should also become a platform for teachers and school principals as leaders to make better use of time, the internet, and smartphones so that their use becomes more meaningful and contributes to the improvement of education quality in schools. The mentoring conducted at SMP Negeri 12 Torgamba, Labuhanbatu Selatan Regency, North Sumatra serves as a benchmark to motivate all school stakeholders, including teachers, principals, as well as private schools, Islamic boarding schools, PAUD (Early Childhood Education), and MTs (Islamic junior high school), to take important points from this paper. It is hoped that it can provide benefits to anyone who is concerned with the sustainable development of quality education that is cost-effective and does not require large expenses.

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