Android-Based Learning Media Development Workshop for Teachers of SMP Negeri 6 Bengkulu City

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ABSTRACT

This community service activity was carried out through an Android-Based Learning Media Development Workshop for teachers at SMP Negeri 6 Bengkulu City with the aim of improving teachers' digital competence and pedagogical skills in using learning technology. The background to this activity was the still dominant use of monotonous print media, which reduces student learning motivation, even though the school already has technological infrastructure such as Android devices and internet access. The workshop was carried out using lecture methods, discussions, direct practice, assignments, and intensive mentoring, so that teachers not only understand the basic concepts of Android-based media development but are also able to produce real products in the form of interactive learning applications. The evaluation results showed complete success, where 100% of participants understood the use of learning resources according to the curriculum (exceeding the target of ≥90%) and 100% of participants were skilled at creating Android-based media (exceeding the target of ≥75%). The resulting products vary according to subject areas, such as interactive math quizzes, experimental video-based science applications, digital social studies modules, and sports educational media. Teacher responses were very positive, with high enthusiasm for the program's sustainability. The impact of this activity includes increased digital literacy, the growth of learning innovation, and the formation of a technology-based creative teacher community. With these achievements, this workshop has proven effective as a sustainable training model that supports the implementation of the Independent Curriculum and improves the quality of education at SMP Negeri 6, Bengkulu City.

Keywords: android, learning media, teachers

INTRODUCTION

SMP Negeri 6 Kota Bengkulu, located on Jl. Muhajirin, Singaran Pati District, Bengkulu City, Bengkulu, is an educational institution dedicated to providing high-quality education to students. With a teaching staff of 30 people, led by an experienced principal, namely Mrs. Septalena, S.Pd. This school offers a conducive and technology-based learning environment to support optimal academic achievement. Through a clear vision and a strong mission, SMP Negeri 6 Kota Bengkulu aims to shape students who have character with integrity and are ready to face global challenges in the future, especially the challenges of digital technology advancements.

The development of Android-based learning media for teachers at SMP Negeri 6 Bengkulu City is imperative for several

important reasons. First, technological advancements have drastically changed the educational landscape, with the use of mobile devices such as smartphones and tablets becoming increasingly common. By leveraging the highly popular Android platform, teachers can create more engaging and relevant learning experiences for students, who have become accustomed to digital technology from an early age [1]. The development of Android-based learning media will enable teachers to create more interactive and engaging learning materials, tailored to students' increasingly diverse learning styles [2]. With a variety of interactive features available, such as video, audio, animation, and interactive quizzes, teachers can create a more engaging and enjoyable learning experience for students. However, in reality, teachers are still fixated on using printed learning media such as printed textbooks and printed worksheets (LKPD/LKS). While these media still have value in the learning process, their overuse can make learning monotonous and less engaging for students. As a result, students' interest and motivation in learning can decline, impacting low academic achievement.

Second, the development of Android-based learning media allows for greater accessibility for students. In an era where internet access is increasingly easy to obtain, students can access learning materials anytime and anywhere, even outside the classroom environment. This enables a more flexible and independent learning process, and provides opportunities for students to learn more personally according to their individual needs and pace [3]. This is supported by observations at SMP Negeri 6, Bengkulu City, which showed that students already own and are able to use Android phones effectively. Furthermore, SMP Negeri 6, Bengkulu City, is now equipped with Wi-Fi/Internet.

Furthermore, Android-based learning media can help address resource and classroom space constraints. Using Android devices, teachers can provide digital learning materials that can be easily shared with all students without the need for printing or limited classroom space [4]. This will help improve the efficiency and effectiveness of the learning process and reduce the costs associated with purchasing printed materials. Finally, the development of Android-based learning media will help teachers remain relevant and competitive in this era of digital education. By gaining knowledge and skills in developing and using Android-based learning media, teachers can improve their professionalism and face increasingly complex educational challenges [5]. This will also help teachers continue to innovate in their teaching methods and provide better learning experiences to students, thereby encouraging better academic achievement and improving the overall quality of education at SMP Negeri 6, Bengkulu City.

SMP Negeri 6 Bengkulu City has 30 competent teachers. However, many teachers still only use printed textbooks and student worksheets (LKPD) for teaching and have not yet utilized digital learning media such as Android. This is because teachers at SMP Negeri 6 Bengkulu City lack knowledge of how to create Android-based learning media. Based on these factors, the community service team was interested in conducting an "Android-Based Learning Media Development Workshop for Teachers at SMP Negeri 6, Bengkulu City." This workshop aims to improve the quality of learning at SMP Negeri 6, Bengkulu City, by utilizing the latest technology. With Android-based learning media, teachers can be more creative and innovative in delivering lesson materials, thereby increasing student interest and understanding.

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MATERIALS & METHODS

The methods used to deliver this training include: lectures, Q&A sessions, discussions, assignments, individual guidance, and independent project-based practice. The lecture, Q&A sessions, and discussions will be used during the initial meeting and during the presentation of workshop materials to participants.

The method of giving assignments and individual guidance was used when training workshop participants to create Android-based learning media, as well as to assess the extent of the participants' skills during the workshop. In this case, the assignments were given in a simple format. Once the workshop participants were deemed to have sufficient skills, they were then given an independent assignment as a project within this training activity, namely Android-based learning media.

A presentation method for Android-based learning media developed by teachers in groups to determine the success of the training activities. Workshop participants must be able to create Android-based learning media according to the trainer's specifications and simultaneously present them to the trainer and other teachers to obtain input for improvements to the Android-based learning media that have been created. Next, workshop participants are given a questionnaire to determine whether they understand the material presented by the trainer during the workshop activities.

Evaluation of activities was carried out during the process and at the end of the workshop, on aspects of achieving workshop objectives and also organizing the workshop. Evaluation of the process and results (achieving workshop objectives) was carried out using questionnaires and documentation. Indicators of success in implementing this workshop, there are 2 methods used, namely: (1) The first stage questionnaire to evaluate the beginning and during the workshop process and the final stage to evaluate teacher responses about the workshop, (2) documentation to evaluate the implementation of this workshop.

The indicators of success of this mentoring are if:

(1) At least 90% of participants/teachers understand how to utilize variousre sources as a source for compiling teacher understanding in utilizing various resources as a source for compiling Android-based learning media, namely: curriculum and other relevant books used in learning.

(2) At least 75% of participants/teachers are skilled in creating Android-based learning media.

RESULT

The Android-Based Learning Media Development Workshop for Teachers at SMP Negeri 6 Bengkulu City was held with teachers from various subject areas, including Mathematics, Science, Social Studies, Informatics, and Physical Education. Based on the evaluation results collected through a questionnaire, this activity went very well and had a positive impact on improving teachers' understanding and skills in utilizing Android-based learning technology.

1. Teachers' Understanding of the Utilization of Learning Resources

Based on the first success indicator, namely that at least 90% of participants understand how to utilize various resources (curriculum, textbooks, and other sources) as a basis for compiling Android-based learning media, the results obtained were that 100% of participants stated "Agree" or "Strongly Agree" with all aspects of understanding measured.

This shows that all participating teachers are able to:

a) Identify learning needs that are in accordance with the curriculum,

b) Determine content and teaching materials from relevant sources,

c) Developing the structure of Android-based learning media by paying attention to learning objectives and student characteristics.

Teacher comments also reinforce these findings, including:

a) "This workshop was very good and beneficial for us teachers at the school. Hopefully, it can be implemented sustainably." (Mr. MPA)

b) "It is very good to increase my skills as a teacher in the field of development of new learning media." (Ms. RH)

From this data, it can be concluded that the first indicator has been met with an achievement of 100%, exceeding the minimum target of 90%.

2. Teacher Skills in Creating Android-Based Learning Media

The second indicator assesses teachers' skills in creating Android-based learning media, with a target of at least 75% of teachers being skilled. Based on the results of the practice and activity reports, all participants (100%) successfully created Android-based learning media applications using the iSpring Suite software.

The media products produced vary according to each subject, such as:

a) Interactive mathematics media based on quizzes and concept animations,

b) Science learning application based on experimental videos,

c) IPS and Informatics digital modules in the form of applications with interactive navigation features,

d) Interactive sports educational media for PJOK.

Participants also showed high enthusiasm and expressed the desire for similar activities to be carried out on an ongoing basis:

a) "Good, looking forward to the next workshop." (Ms. LJY)

b) "It is hoped that it will be sustainable in the long term." (Ms. HMC)

Thus, the participant skill indicators were also met maximally (100%), indicating complete success in assisting in creating Android-based learning media.

3. Reflection and Impact of Activities

Overall, the workshop successfully met all indicators of success. Teachers not only understood the basic concepts of media development but were also able to implement the results into tangible products. The 100% success of participants in creating applications demonstrates that the training method used (with a hands-on approach and intensive mentoring) effectively improves teachers' digital competency.

In addition, this activity has positive impacts in the form of:

a) Improving digital literacy of teachers at SMP Negeri 6 Bengkulu City,

b) Growing awareness to continue to innovate in learning,

c) The formation of a community of creative teachers in the development of technology-based media.

The results section presents the results of the community service activities. To facilitate understanding and interpretation, results can be presented categorically, descriptively using words, descriptively using numbers (statistics), in tables, graphs, charts, comparative tests, correlation tests, and so on.

DISCUSSION

The Android-Based Learning Media Development Workshop for teachers at SMP Negeri 6 Bengkulu City demonstrated significant success in improving teachers' understanding and skills in utilizing digital technology. Based on the evaluation results, all participants (100%) were able to understand the basic concepts of Android-based media development and were skilled at creating interactive learning applications. This aligns with the findings of Astuti et al. who emphasized that Android-based learning media can improve student motivation and learning outcomes due to its interactive and flexible nature [5].

Furthermore, the teachers' success in developing applications using iSpring Suite and Website 2 APK Builder supports research by Kuswanto and Radiansah, who stated that Android-based media allows

learning to take place anytime and anywhere, thereby expanding students' access to materials [6]. The workshop results also reinforce Batubara's opinion that smartphone-based digital media is more engaging for students than print media because it combines text, audio, video, and animation in one platform [7].

In terms of impact, this activity successfully improved teachers' digital literacy and encouraged the formation of a technology-based creative community. This is consistent with research by Murtopo et al., which emphasized the importance of utilizing mobile devices to support independent and flexible learning [3]. Therefore, this workshop was not only relevant to the local needs of SMP Negeri 6 Bengkulu City but also strengthened empirical evidence that integrating Android-based learning media is an effective solution for improving the quality of learning in the digital era.

CONCLUSION

Based on the results of the evaluation and reflection, the Android-Based Learning Media Development Workshop for Teachers of SMP Negeri 6, Bengkulu City can be declared 100% successful in meeting the mentoring success indicators:

1. 100% of teachers understand the use of learning resources as a basis for developing Android-based media (target ≥90%).
2. 100% of teachers are skilled at creating Android-based learning media (target ≥75%).

This activity has proven effective in improving teacher competency in the field of learning technology and is expected to become a model for ongoing training in the environment.

Conflict of Interest: The authors declare no conflict of interest.

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