



Research Article

Improving Teachers' Teaching Competence Through Training In Educational Media Creation

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Improving Teachers' Teaching Competence Through Training In Educational Media Creation

Abstract. This article describes a strategy for improving teachers' competencies through training in the creation of interactive learning media. The research involved 15 teachers from SMA Muhammadiyah Kasihan Bantul as respondents. This evaluative study used pre-test and post-test methods to assess the effectiveness of the training program in creating interactive learning media using the Book Creator and Blooket platforms. The choice of Book Creator and Blooket as learning media was based on their ease of use, which allows for the creation of engaging graphic designs and content that supports interactive and innovative learning. The results of the training activities showed a significant improvement in the teachers' competencies. Before the training, the average knowledge

and skills of the teachers in using learning media was only 65%. However, after the workshop, there was a significant increase, with the post-test results showing an average improvement in teacher competencies to 92.5%. Based on these evaluation results, it can be concluded that the training activities were effective in enhancing teachers' competencies, particularly in using interactive media technologies in the learning process. By utilizing platforms like Book Creator, teachers can create more engaging, creative, and student-centered learning materials, thus supporting the achievement of optimal learning outcomes.

Keywords: Teaching competencies, learning media, digital platform, interactive media.

Abstrak. Artikel ini menguraikan strategi peningkatan kompetensi guru melalui pelatihan pembuatan media pembelajaran interaktif. Penelitian ini melibatkan 15 guru SMA Muhammadiyah Kasihan Bantul sebagai responden. Studi evaluatif ini menggunakan metode pre-test dan post-test untuk menilai efektivitas program pelatihan pembuatan media pembelajaran interaktif menggunakan platform Book Creator dan Blooket. Pemilihan Book Creator dan Blooket sebagai media pembelajaran didasarkan pada kemudahan penggunaannya, yang memungkinkan terciptanya desain grafis dan konten yang menarik yang mendukung pembelajaran interaktif dan inovatif. Hasil kegiatan pelatihan menunjukkan peningkatan kompetensi guru yang signifikan. Sebelum pelatihan, rata-rata pengetahuan dan keterampilan guru dalam menggunakan media pembelajaran hanya 65%. Namun, setelah lokakarya, terjadi peningkatan yang signifikan, dengan hasil post-test menunjukkan peningkatan rata-rata kompetensi guru menjadi 92,5%. Berdasarkan hasil evaluasi tersebut, dapat disimpulkan bahwa kegiatan pelatihan efektif dalam meningkatkan kompetensi guru, khususnya dalam penggunaan teknologi media interaktif dalam proses pembelajaran. Dengan memanfaatkan platform seperti Book Creator, guru dapat membuat materi pembelajaran yang lebih menarik, kreatif, dan berpusat pada siswa, sehingga mendukung tercapainya hasil belajar yang optimal.

Kata Kunci: Kompetensi mengajar, media pembelajaran, platform digital, media interaktif.

INTRODUCTION

Students generally remain highly dependent on guidance and direction from teachers during the learning process. This highlights the crucial role of teachers as the primary facilitators in education (Brandt, 2020). As technology rapidly advances, teachers must possess the ability to master the latest educational technologies in order to effectively transfer knowledge to students. This skill has become critical, as rapidly evolving learning technologies can serve as highly effective tools to enhance the quality of education. However, the reality is that many teachers still lack the knowledge and skills needed to create engaging learning media that meet the needs of children (Yudianto, 2017). In fact, with proficiency in the design and production of appropriate learning media, teachers can create learning tools that not only effectively convey material but also encourage active participation, creativity, and enjoyment in the learning process (Kulsum, 2020).

Learning media plays a vital role in enhancing students' understanding in schools. As teaching aids, media such as slides, photos, graphics, films, and computers can be used to capture, process, and reassemble visual and verbal

information, making it easier for students to grasp the content being taught (Nurhalimah & Azzahra, 2023). These media not only assist teachers in delivering lessons but also provide students with more concrete experiences, thereby boosting their motivation and improving their retention of the material (Maymunah & Watini, 2021). Consequently, the development of learning media requires teachers to adapt to the tools and technologies available at schools, in line with the evolving educational demands of modern times (Marpaung & Siregar, 2023).

The appropriate use of media in teaching can prevent boredom and enhance the quality of the students' learning experience. Therefore, it is essential for teachers to shift the focus of learning from a teacher-centered approach to a student-centered approach, with teachers acting as facilitators who guide and support the learning process. This aligns with the views expressed by Khalifaturahma & Mufida (2020) that the success of learning is significantly influenced by how well teachers engage students actively in all learning activities and create a comfortable classroom environment. In the context of education, media are graphic, photographic, or electronic tools used to capture, process, and reorganize visual or verbal information so that students can access and understand the learning material more comprehensively (Alam, 2019). Learning media can take various forms of communication, including print media (such as books and worksheets) and audiovisual media (such as videos, digital presentations, or computer applications), as well as the equipment that supports the learning process. When used effectively, learning media should be manipulable, visible, audible, and readable, thereby creating a more interactive and immersive learning experience (Tafonao, 2018).

However, despite the great potential of learning media to support effective teaching, not all teachers are able to utilize these media properly (Kandia et al., 2023). In fact, many teachers still struggle to create engaging and enjoyable learning media for students, which leads to problems in the teaching and learning process in classrooms. This issue is also evident at SMA Muhammadiyah Kasihan in Bantul, where, despite the high input from students, the available learning facilities are still far from adequate. As a result, teachers are required to continually improve their ability to manage learning effectively, utilizing various available learning media, so that students remain engaged and do not feel bored during lessons. Given that one of the main missions of SMA Muhammadiyah Kasihan is to prepare a generation proficient in science and technology (IPTEK), the competence of teachers in this area is crucial and highly needed.

After conducting an initial observation at SMA Muhammadiyah Kasihan, we identified several potentials that could be further developed. These include the school's strategic location in the city center, which facilitates accessibility for both students and teachers. Additionally, the majority of the teachers at this school are young, familiar with the use of media in teaching processes. However, teachers still face several challenges, such as limited learning facilities, limited time for

professional development, and a restricted budget for acquiring teaching support tools. Therefore, appropriate strategies are needed to address these challenges and enhance the quality of teaching at the school.

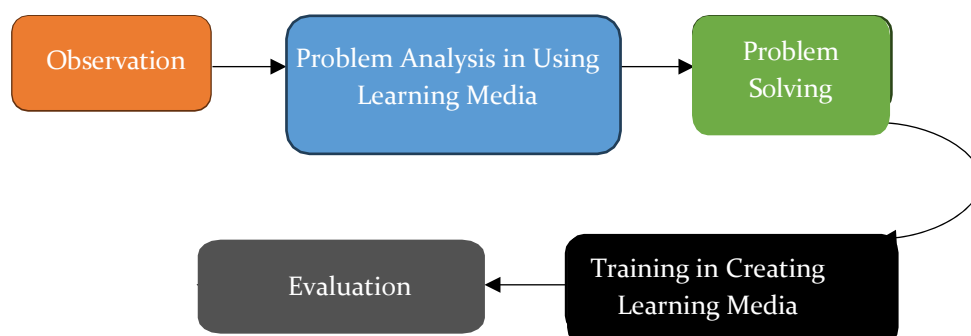
This article aims to explore strategies that can be implemented to enhance teachers' competence in creating interactive learning media. By improving teachers' ability to create effective and engaging learning media, it is hoped that the quality of education at SMA Muhammadiyah Kasihan will significantly improve, positively impacting the students' learning outcomes.

RESEARCH METHODS

This quantitative study employs a survey approach to measure the effectiveness of a training program, beginning with a pre-test and concluding with a post-test, conducted with all 15 teachers at SMA Muhammadiyah Kasihan. The process of the training activities is illustrated through a flowchart, which serves as a guideline for implementing efforts to enhance the professional competencies of the teachers, specifically in the creation of learning media. The flowchart delineates the steps undertaken throughout the implementation process, from the planning stage through to evaluation, ensuring that each phase of the activity is systematically executed to achieve successful outcomes and deliver a positive impact on the teachers' professional development.

Expanding upon this, the use of a pre-test and post-test design allows for an empirical and systematic assessment of the training's effectiveness, providing measurable indicators of knowledge or skill acquisition (Westphale et al., 2022). By employing a structured flowchart, the research not only guarantees clarity in the execution of the program but also promotes accountability at each stage. The planning phase focuses on identifying the specific needs of the teachers in relation to developing educational media, aligning training objectives with those needs. The implementation phase involves the actual delivery of training modules, interactive workshops, and practical exercises. The evaluation phase, crucially, assesses not only the immediate learning outcomes but also the potential for sustainable competency improvement over time.

Figure 1. The Process of Training



RESULTS AND DISCUSSION

Observation And Analysis Of Learning Media Usage

In the initial phase, the researcher conducts observations and in-depth analysis regarding the use of learning media by teachers. This exploration aims to uncover teachers' understanding and knowledge concerning the creation and application of various types of learning media, ranging from traditional tools (such as printed materials and manual illustrations) to modern, technology-based platforms (such as digital applications and online educational websites). By carefully observing and analyzing these practices, the researcher seeks to identify existing gaps, needs, and potentials in the teachers' ability to utilize media effectively to enhance the learning experience.

The observations conducted during the study revealed a critical gap in the integration of instructional media within classroom teaching practices. It was found that not all teachers utilized learning media during their lessons, and a significant number of them demonstrated difficulties in creating such media independently. This finding indicates that the teachers' understanding and application of professional competence, particularly in the dimension of creativity and instructional innovation, have not yet been fully actualized in practice.

Professional competence for teachers, according to established educational theories and national professional standards, includes the ability to design, implement, and evaluate effective instructional strategies — among which the use of creative and innovative learning media is fundamental. The lack of media use in classrooms suggests a disconnect between theoretical knowledge and practical application, potentially hindering the effectiveness of the teaching-learning process.

This situation underscores the urgent need for targeted interventions, such as specialized training programs, workshops, and ongoing professional development initiatives, to bridge the gap between competence and practice. Enhancing teachers' skills in media creation and utilization is not merely a technical enhancement; it is a transformative process that empowers teachers to foster more engaging, student-centered learning environments.

Moreover, in the current era of digital learning and technological advancement, the ability to creatively integrate multimedia resources into teaching is no longer optional but essential. Without adequate skills and creativity in instructional design, teachers risk delivering lessons that are less engaging, less accessible, and less effective for diverse learners. Thus, addressing this competency gap is a critical step toward improving the overall quality of education and ensuring that teachers can fulfill their roles as facilitators of meaningful learning experiences

Analysis And Guidance On Learning Media Usage

Following the initial observation, the researcher provides structured knowledge transfer sessions focusing on how to develop learning media appropriately aligned with the subjects taught in the classroom. The purpose of this phase is to ensure that teachers of SMA Muhammadiyah Kasihan gain a clear understanding of the different forms of media that are most suitable for the specific topics and levels of their students' cognitive development. During this socialization session, teachers are guided on how to select media that is appropriate for use now, media that is currently in use, and media that could be adopted in the future. This stage is deeply rooted in Musfiquon's (2012) theory, which emphasizes that learning media serve as crucial intermediaries between teachers and students to facilitate effective and efficient understanding of learning material. As a result, the strategic use of appropriate media not only captures students' attention but also fosters their intrinsic motivation, ultimately leading to better mastery of the material and quicker achievement of learning objectives (Usmaedi et al., 2020).

Introduction Of Solution Methods

The next step in enhancing the teaching and learning experience involves the introduction of digital platforms, specifically Book Creator and Blooket, which will serve as alternative tools for developing interactive and engaging learning media. These platforms offer a wide range of possibilities for teachers to diversify their teaching methods and present content in innovative ways that resonate with students. The purpose of this introduction is twofold: first, to expand the repertoire of media available to educators, allowing them to move beyond traditional methods and incorporate creative, digital alternatives that cater to different learning styles; and second, to foster the integration of technology into the classroom, positioning it as a key component of professional teaching practice. By embracing these platforms, teachers are encouraged to utilize digital tools effectively, thus enhancing their teaching strategies and the overall learning environment.

As Freire (2021) highlights, feedback is an essential element in evaluating the effectiveness of the teaching process and plays a vital role in the professional development of educators. It provides valuable insights into the strengths and areas for improvement in teaching practices, allowing educators to refine their approaches and better meet the needs of their students. Therefore, the introduction of Book Creator and Blooket not only serves as a means of feedback, enabling teachers to assess their progress in adapting to new teaching tools, but also contributes to their ongoing professional growth. By engaging with these platforms, teachers are able to enhance their skills in integrating technology, thus staying current with emerging trends in education and strengthening their ability to create dynamic, technology-driven learning environments. This continuous development is crucial in ensuring

that teachers are well-equipped to navigate the evolving landscape of modern education.

Training And Workshop On Learning Media Creation

This phase encompasses conducting workshops and hands-on training sessions where teachers are coached on using *Book Creator* and *Blooket* and on how to implement these tools within the subjects they teach. Each participant (teacher) receives personalized guidance, starting from basic platform navigation (login procedures) to the application of evaluation techniques via these digital tools to their students. The ability of teachers to deliver learning outcomes through such innovative platforms reflects a higher degree of professionalism and transparency in the assessment process (Schleicher, 2016). Moreover, it cultivates an atmosphere of openness, where the evaluation of student learning is dynamic, interactive, and easily accessible for continuous improvement. The core phase of the training and workshop was conducted in the conference room of the Faculty of Islamic Studies at Universitas Muhammadiyah Yogyakarta on April 17, 2025, with the full participation of all teachers from SMA Muhammadiyah Kasihan.

Prior to the commencement of the training, teachers were required to answer a series of prepared questions aimed at assessing their initial understanding of learning assessment concepts. This pre-test was conducted via a Google Form and served to establish a baseline of the participants' knowledge. The workshop's first phase involved a refreshing session on the fundamental concepts of instructional media in the digital era. This session introduced the use of digital platforms, specifically *Book Creator* and *Blooket*, by first explaining their functions and practical applications. Participants were also informed about the strengths and limitations of each platform when applied to various subjects they taught.

The primary objective of the workshop was to deliver practical training, facilitate direct interaction, and provide an intensive learning experience. The training specifically focused on the creation of instructional media using *Book Creator* and *Blooket*. These two platforms were selected due to their suitability for users with minimal media editing experience, making them particularly appropriate for senior teachers at SMA Muhammadiyah Kasihan who may not have had prior exposure to digital media design.

Figure 3. Initial view of Book Creator

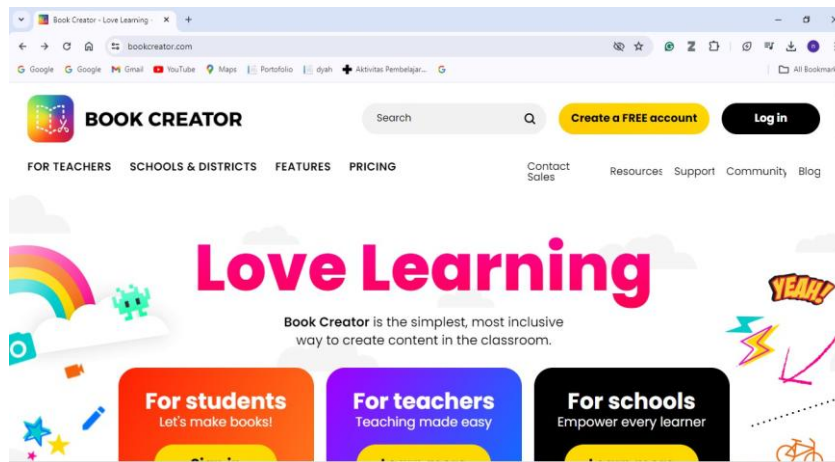


Figure 4. Blooket Account Login Process

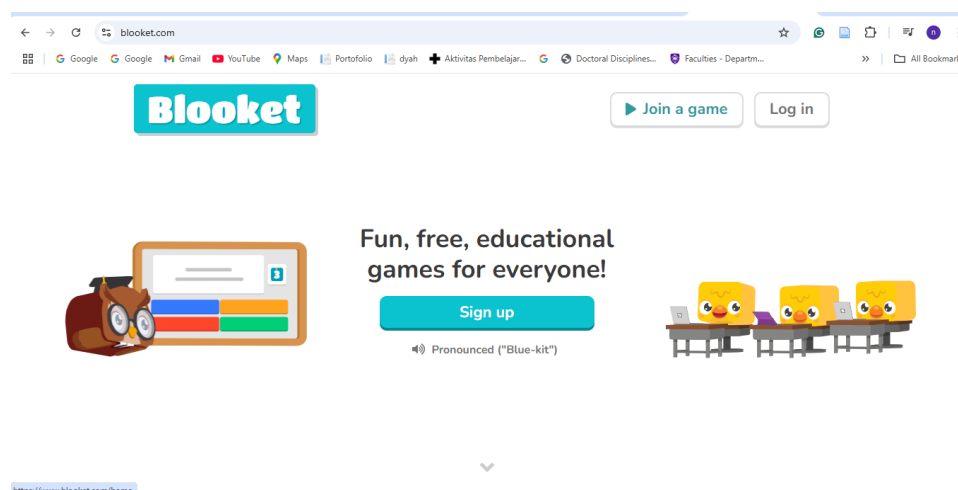
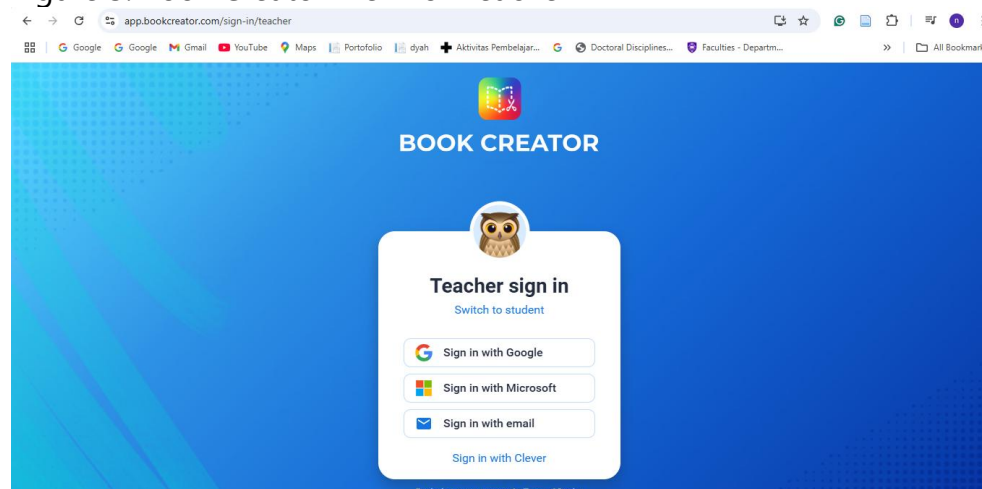


Figure 5. Book Creator View for Teacher



Following the setup of internet access, laptops, and the creation of Book Creator accounts, the facilitator began explaining the step-by-step procedures. Participants were instructed to open the Book Creator platform on their respective laptops. Figures 3 and 4 illustrate the login process to Book Creator and Blooket, requiring an email address and password, both accessible for free. The registration process offers three options: student, teacher, or school accounts. For this workshop, the service team directed participants to register under the "teacher" option, as depicted in Figure 5. Subsequent Figures 6 and 7 show the initial interfaces of Book Creator and Blooket, respectively, which were also used as instructional slides to explain the tools available for module and media creation.

Figure 6. Book Creator View for Practice

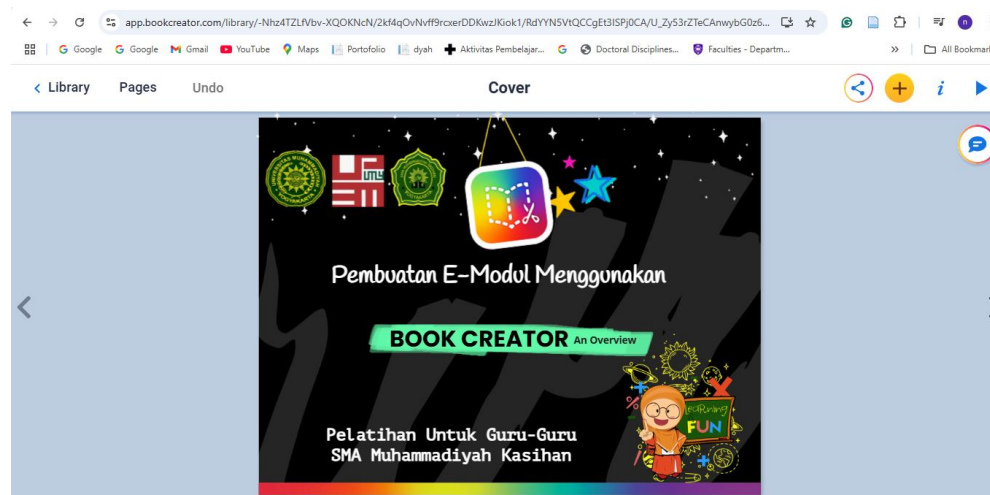
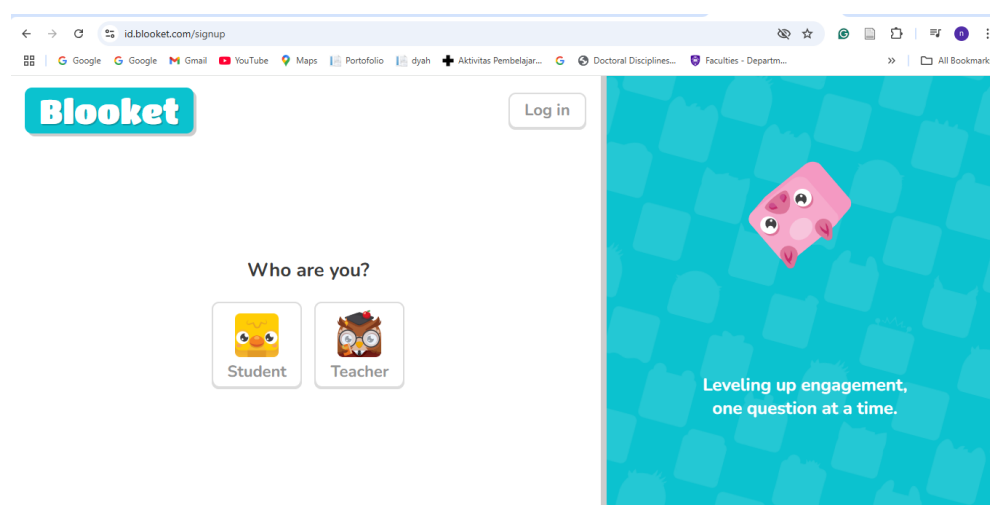


Figure 7. Blooket View for Teacher or Student



After successfully logging in and familiarizing themselves with the basic features of both platforms, the participants moved on to the next phase: designing new instructional media using Book Creator and Blooket. This phase emphasized practical application, enabling the teachers to consolidate their newly acquired skills and integrate digital technology effectively into their future teaching practices.

Evaluation

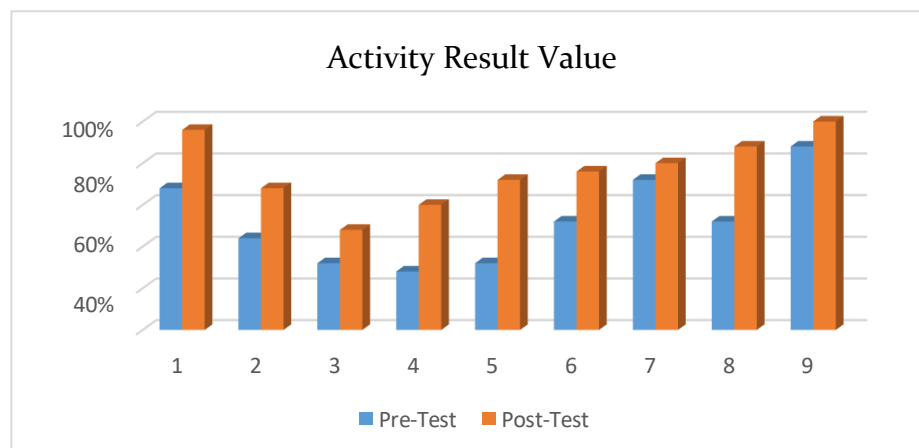
The final phase of the program involves conducting a comprehensive evaluation session aimed at assessing the overall effectiveness and impact of the training initiative. During this phase, teachers are asked to complete a detailed questionnaire designed to measure various aspects of their experience, including their level of understanding, engagement, and interest throughout the training process. The responses collected through this feedback form a critical component of the evaluation, as they provide empirical data that can be analyzed to gain insights into the effectiveness of the program. This feedback is invaluable, as it allows for the identification of areas where the program may have fallen short or areas that were particularly well-received. By examining these results, future training sessions can be refined and adjusted, ensuring that professional development initiatives are better aligned with the actual needs and preferences of teachers. This process ensures that the program remains dynamic and responsive to the evolving requirements of educators, fostering a culture of continuous improvement.

The evaluation process is conducted after the successful completion of all the tasks and activities outlined in the training program. At this stage, the evaluation serves as a crucial tool for measuring the extent to which the program's objectives have been effectively achieved. A key focus of the evaluation is assessing the knowledge and skills of the teachers from SMA Muhammadiyah Kasihan, with the goal of determining whether there has been a significant improvement in their capabilities compared to their pre-training condition. This evaluation is carried out through a carefully designed post-test, which aims to assess various aspects of the teachers' learning, including their mastery of the material, their conceptual understanding of the topics covered, and their ability to practically apply the new skills acquired throughout the training.

Moreover, the evaluation process also serves as a foundation for reflection on the program's overall success and areas for enhancement. It offers a valuable opportunity for both the trainers and the participants to reflect on the outcomes and identify opportunities for further development. The insights gained from this evaluation will not only inform adjustments to future training programs but also contribute to the ongoing improvement of teaching practices within the school. By focusing on the continuous refinement of the professional development process, the program ensures that the quality of teaching at SMA Muhammadiyah Kasihan

continues to evolve, ultimately enhancing the educational experience for both teachers and students alike. This ongoing commitment to quality and improvement ensures that the training remains relevant, impactful, and aligned with the best practices in education.

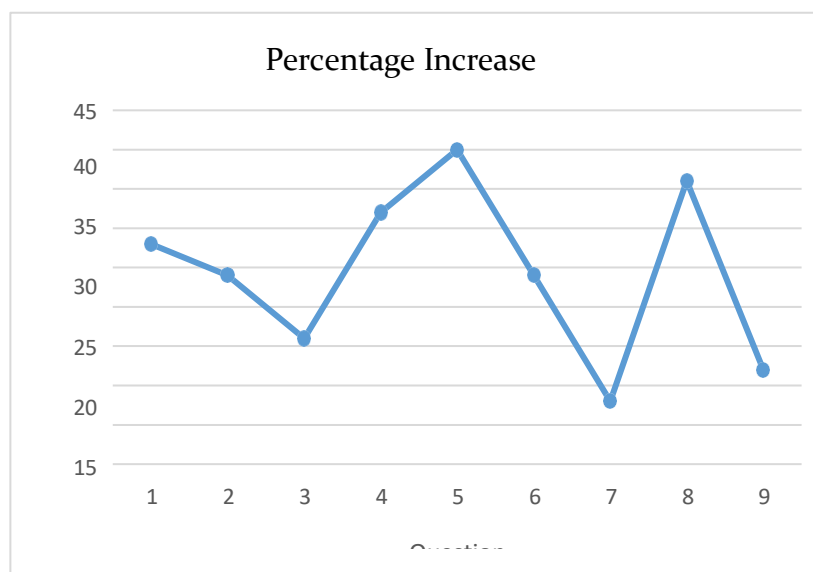
Figure 8. Activity Result Value Graph



From the graph above, it is evident that the results of the pre-test and post-test demonstrated an increase in the average scores across all indicators related to knowledge. This improvement suggests that the training provided was effective in enhancing the teachers' knowledge. The results are presented in the form of the average percentage increase for each knowledge-related question. The highest average percentage increase was recorded for question number 5, at 40%, which pertained to the teachers' understanding of the Book Creator and Blooket platforms. This finding indicates that both platforms offer intuitive and user-friendly interfaces, enabling teachers—even those with no prior experience—to quickly learn and utilize the available features.

On the other hand, the lowest average percentage increase was observed for question number 8, at 8%. This question highlighted the difficulties teachers encountered when using the graphic features of the two platforms, indicating a need for additional training in this area. Furthermore, regarding the question on whether Book Creator and Blooket could be used across all subject areas, the results showed a 36% increase in affirmative responses. This suggests that the platforms are versatile and can support a wide range of academic disciplines, making it easier for teachers from various subject backgrounds to integrate them into their teaching practices.

Figure 9. Percentage Graph of Increase in Activity Results



The empirical findings from this workshop and training underscore a crucial point in contemporary educational theory: professional development must not only impart knowledge but also cultivate skills that are directly transferable to the classroom setting. According to Guskey's Model of Teacher Change (2002), sustainable improvement in teaching practices stems from professional learning experiences that are practical, immediately applicable, and responsive to teachers' needs—an observation clearly supported by the outcomes at SMA Muhammadiyah Kasihan.

Moreover, the emphasis on platforms like *Book Creator* and *Blooket* resonates strongly with Vygotsky's Social Constructivism theory, where learning occurs most effectively through active participation and engagement with meaningful tools. These platforms, by providing easy-to-navigate interfaces and creative opportunities, empower teachers to become not just passive recipients of technology, but active designers of digital learning environments. It is also worth noting that the program aligns with the principles of Universal Design for Learning (UDL), which advocate for multiple means of representation, engagement, and expression in education (Priyadharsini & Mary, 2024). Through the use of varied media formats and interactive features, teachers can address diverse student needs and learning styles, ultimately fostering a more inclusive classroom environment. The success of this workshop reflects a systematic, logical, and responsive approach to teacher professional development. It highlights the transformative potential of targeted, technology-based training initiatives and underscores the urgency of integrating digital competencies into standard teacher education frameworks to meet the demands of the modern educational landscape.

CONCLUSION

To enhance the professional competencies of teachers, workshop activities have proven to be particularly effective, especially in the development of interactive learning media. The results of the workshops demonstrated that, initially, teachers' understanding of the importance of learning media was not yet well established. However, following the completion of the workshop, there was a significant improvement in their knowledge and awareness. Providing training in the development of learning materials through platforms such as *Book Creator* and *Blooket* represents a critical step toward strengthening teachers' pedagogical skills. These platforms were deliberately chosen based on their user-friendliness, the availability of ready-to-use templates that simplify the creation of educational content, and their visually engaging design elements that effectively capture students' attention. Consequently, the use of these platforms has contributed to the enhancement of the quality and appeal of instructional materials.

At SMA Muhammadiyah Kasihan, the implementation of these platforms during practical sessions revealed that teachers were capable of utilizing *Book Creator* and *Blooket* to produce engaging and interactive educational resources. Moreover, evidence suggests that the integration of *Book Creator* fostered greater creativity among teachers, enabling them to design more captivating and student-centered learning experiences. Some teachers even extended the use of these tools to the creation of question blueprints for assessments, showcasing the versatility and practical application of the platforms beyond regular lesson materials. Thus, the implementation of such training programs has demonstrably improved teachers' competencies while simultaneously offering innovative options to enrich the teaching and learning process. This advancement is expected to lead to more dynamic, engaging, and efficient educational environments in the future. Furthermore, this initiative can serve as a model for developing a forward-looking education system that aligns with contemporary technological trends and addresses the evolving needs of 21st-century learners.

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