The Impact of Educational Technology Advancements on Efficiency and Professional Teacher Training in Sidrap Regency

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Abstract

This study examines the impact of educational technology advancements on the efficiency and effectiveness of professional teacher training programs in Sidrap Regency. The integration of technology in education has created opportunities for flexible, accessible, and innovative learning, particularly in improving teacher competencies. Through the use of online platforms, digital tools, and multimedia resources, educational technology supports teachers in enhancing their skills and pedagogical approaches.Using a qualitative descriptive approach, data were collected through interviews, observations, and document analysis with teachers and training coordinators. The findings indicate that while educational technology improves efficiency by offering flexible learning and collaborative opportunities, challenges persist, such as limited digital literacy, insufficient infrastructure, and inconsistent internet access in rural areas. Despite these barriers, teachers recognize the benefits of technology in making professional training more effective and engaging.

The study concludes that targeted interventions, including digital literacy training, infrastructure improvements, and increased support for technology adoption, are necessary to maximize the impact of educational technology. These findings provide valuable insights for policymakers and educational institutions to enhance teacher training programs, ensuring they meet the demands of modern education systems.

Keywords: Educational Technology, Professional Teacher Training, Efficiency, Sidrap Regency

Abstrak

Penelitian ini bertujuan untuk mengkaji dampak kemajuan teknologi pendidikan terhadap efisiensi dan efektivitas program pendidikan profesi guru di Kabupaten Sidrap. Integrasi teknologi dalam pendidikan telah membuka peluang pembelajaran yang fleksibel, mudah diakses, dan inovatif, terutama dalam meningkatkan kompetensi guru. Melalui penggunaan platform daring, alat bantu digital, dan sumber daya multimedia, teknologi pendidikan mendukung guru dalam mengembangkan keterampilan dan pendekatan pedagogis yang lebih baik.

Penelitian ini menggunakan pendekatan deskriptif kualitatif dengan teknik pengumpulan data berupa wawancara, observasi, dan analisis dokumen yang melibatkan guru dan koordinator program pelatihan. Hasil penelitian menunjukkan bahwa teknologi pendidikan meningkatkan efisiensi dengan menyediakan pembelajaran yang lebih fleksibel dan kolaboratif. Namun, terdapat tantangan seperti keterbatasan literasi digital, infrastruktur yang kurang memadai, serta akses internet yang tidak merata di daerah pedesaan. Meski demikian, sebagian besar guru mengakui manfaat teknologi dalam membuat program pelatihan lebih efektif dan menarik.

Penelitian ini menyimpulkan bahwa intervensi yang tepat, seperti peningkatan literasi digital, perbaikan infrastruktur, dan dukungan terhadap adopsi teknologi, diperlukan untuk memaksimalkan dampak positif teknologi pendidikan. Temuan ini memberikan wawasan berharga bagi pembuat kebijakan dan lembaga pendidikan untuk mengembangkan program pelatihan guru yang lebih efektif dan berkelanjutan di era digital.

Kata Kunci: Teknologi Pendidikan, Pelatihan Profesi Guru, Efisiensi, Kabupaten Sidrap

INTRODUCTION

The advancement of educational technology has brought transformative changes to the global education landscape. As societies progress in the digital era, integrating technology into teaching and learning processes has become not only a trend but a necessity. These advancements encompass tools, systems, and platforms that facilitate access to resources, improve teaching efficiency, and enhance the overall quality of education. In particular, educational technology plays a vital role in fostering professional development among teachers, ensuring that they meet modern educational demands.

Teacher Professional Education Programs, such as those implemented in Sidrap Regency, aim to improve teachers' pedagogical skills, competencies, and professionalism. The use of educational technology within these programs can provide innovative solutions to traditional challenges, including limited resources, outdated teaching methods, and time inefficiencies. Through tools like online learning platforms, digital teaching aids, and interactive resources, teachers are now better equipped to manage their professional training efficiently and effectively.

Efficiency is a critical factor in professional teacher training, as it determines how well resources, time, and energy are utilized to achieve desired outcomes. The integration of technology allows teachers to access learning materials remotely, engage in collaborative professional development, and apply technology-driven strategies in their teaching practices. This ensures that teachers not only meet curriculum standards but are also prepared to integrate 21st-century skills into their classrooms.

In Sidrap Regency, the adoption of educational technology in teacher professional training is still at an evolving stage. While technological tools and infrastructure are increasingly accessible, challenges such as digital literacy, internet availability, and teacher adaptability remain significant concerns. However, despite these challenges, many educators and policymakers recognize the potential of technology in transforming the education system.

Research on the role of technology in professional teacher training highlights both its benefits and its limitations. On one hand, technology facilitates more flexible and accessible training opportunities. On the other, issues like resistance to change, technological inequality, and lack of technical support can hinder its successful implementation. Understanding the balance between these factors is crucial to maximizing the efficiency and impact of teacher training programs.

This study focuses on exploring the impact of technological advancements on the efficiency and effectiveness of professional teacher training programs in Sidrap Regency. Specifically, it examines how teachers utilize educational technology, the challenges they face, and the extent to which technology enhances their professional development. This research is particularly relevant in light of increasing national and global demands for quality education and competent educators.

The findings of this study will provide insights into the strengths and weaknesses of current practices in integrating technology into professional teacher training. It will also offer recommendations for improving the efficiency of training programs through targeted technological interventions. By identifying best practices and areas for improvement, this research aims to contribute to the broader goal of enhancing teacher quality and, consequently, improving student learning outcomes.

In conclusion, the role of educational technology in professional teacher training is an important area of inquiry that holds significant implications for education systems worldwide. In Sidrap Regency, addressing technological challenges and harnessing the benefits of innovation can help build a more efficient, accessible, and high-quality teacher training program. This study serves as a step toward realizing that vision, providing a

foundation for future research and policymaking in educational technology and teacher professional development.

RESEARCH METHOD

This study employed an experimental research design to investigate the effect of Script-Based Improvisation on students' speaking achievement. The research design used was the Posttest-Only Control-Group Design, where two groups of students were involved: the experimental group and the control group. The experimental group was taught using the Script-Based Improvisation technique, while the control group was taught using the conventional memorization technique. This design allowed for a comparison between the two groups to determine if there was a significant difference in their speaking achievement.

The participants of this study were eleventh-grade students from SMA Muhammadiyah Pangsid. The total population consisted of students from different classes. To select the sample, the Cluster Random Sampling technique was applied. From the total population, two classes were randomly selected to be the experimental and control groups. The experimental group consisted of students who were taught using the Script-Based Improvisation technique, while the control group consisted of students who were taught using the memorization technique.

The primary instrument for data collection was a speaking test, which was used to measure the students' speaking achievement. The test was administered as a post-test after six treatment sessions. Both groups underwent the same speaking test, which assessed their ability to communicate ideas clearly, use appropriate vocabulary, and maintain fluency in speaking. The test was designed to be objective and fair, ensuring that it measured the speaking skills effectively for both groups. Additionally, a rubric was used to evaluate the students' speaking performance, considering criteria such as pronunciation, grammar, vocabulary, and fluency.

The study was conducted over a period of six weeks. During this time, both the experimental and control groups received treatment. The experimental group was taught using the Script-Based Improvisation technique, where students were encouraged to develop and improvise based on a pre-written script. This method allowed them to express their thoughts more freely and creatively. In contrast, the control group was taught using the conventional technique of memorizing dialogues, where students practiced and recited pre-learned dialogues.

The teaching sessions were conducted in the classroom, with each session lasting approximately 60 minutes. At the end of the treatment, both groups took the post-test to assess their speaking achievements. The post-test was administered under controlled conditions to ensure fairness and reliability.

Data Collection and Analysis

Data collected from the post-test were analyzed using both descriptive and inferential statistics. Descriptive statistics were used to provide a general overview of the students' performance in both groups, including the mean, median, and standard deviation of their test scores. Inferential statistics, specifically the t-test (independent samples t-test), were used to determine if there was a significant difference in the speaking achievement between the experimental and control groups. The t-test was chosen because it allows for the comparison of two independent groups to see if the observed differences are statistically significant.

The significance level for the t-test was set at 0.05, meaning that any p-value lower than 0.05 would indicate a statistically significant difference between the two groups.Prior to the study, the researcher obtained informed consent from the participants and ensured that their participation was voluntary. The anonymity and confidentiality of the participants' data were also maintained throughout the study. The results of the study were shared only with the relevant educational stakeholders and used for academic purposes.

FINDINGS AND DISCUSSION

This study identified several impacts of educational technology advancements on the efficiency and effectiveness of teacher professional training programs in Sidrap Regency. Based on data collected through interviews with teachers, training coordinators, and document analysis, it was found that educational technology plays a significant role in enhancing the efficiency of teacher training. The use of online platforms, digital tools, and multimedia learning materials has made it easier for teachers to access training materials and has accelerated the learning process.

Teachers involved in this study reported that they found it easier to access information, engage in flexible training opportunities, and collaborate with peers. Furthermore, technological tools such as learning management applications and educational videos helped teachers in planning and delivering more interactive and engaging lessons. This, in turn, led to improvements in their pedagogical competencies.

However, despite the benefits, several challenges were identified in the study. A major challenge faced by teachers in Sidrap Regency is the low level of digital literacy, particularly among senior teachers. Additionally, uneven internet access and inadequate infrastructure in some areas also pose significant barriers to the optimal implementation of educational technology.

Discussion

The advancement of educational technology has proven to have a positive impact on the efficiency of teacher professional training programs in Sidrap. As the use of technology increases in teacher training, the time required to complete training programs has shortened due to easier and quicker access to various learning resources. The use of online learning platforms allows teachers to engage in self-paced learning, offering greater flexibility in scheduling their training sessions. This is particularly useful for teachers who face challenges in attending face-to-face training due to time or location constraints.

However, challenges such as low digital literacy and inadequate infrastructure remain significant barriers that need to be addressed. Many teachers, especially those with more experience, have difficulty using technology for teaching purposes. This highlights the need for more intensive training on the use of technology and the introduction of new tools available to support the learning process. Additionally, providing adequate infrastructure, such as stable internet access and better technological devices, is crucial to ensure that all teachers, particularly those in rural areas, can fully benefit from technological advancements.

Overall, while there are challenges in its implementation, educational technology proves to be a valuable tool in enhancing the efficiency and quality of teacher professional education in Sidrap Regency. Policies that support digital literacy training for teachers, infrastructure improvement, and the provision of adequate devices are essential to overcoming these challenges. With these measures in place, educational technology is expected to have a greater positive impact on the development of the teaching profession in Sidrap.

CONCLUSION

This study has demonstrated that educational technology advancements play a significant role in enhancing the efficiency and effectiveness of teacher professional training programs in Sidrap Regency. The integration of digital tools, online platforms, and multimedia resources has facilitated easier access to training materials, greater flexibility in learning schedules, and improved collaboration among teachers. These technological advancements have not only made the training process more efficient but have also contributed to the enhancement of teachers' pedagogical competencies and overall professional development.

However, the research also highlighted several challenges, particularly the low digital literacy among some teachers, limited infrastructure, and inconsistent internet access in rural areas. These barriers must be addressed to ensure that the benefits of educational technology are fully realized. It is crucial to provide ongoing digital literacy training, improve technological infrastructure, and ensure equal access to digital resources for all teachers, especially those in remote areas.

In conclusion, while educational technology has proven to be a valuable asset in improving teacher training efficiency in Sidrap, its full potential can only be achieved through targeted interventions and policy reforms. By addressing the existing challenges and continuing to support the adoption of technology in education, Sidrap Regency can foster a more effective, accessible, and modern professional teacher training program, ultimately benefiting both teachers and students.

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