



Analysis of Learning Media Needs for Economics in the Digital Era at SMA Muhammadiyah 1 Sekampung Udik

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Abstract

The digital era has brought significant changes to the field of education, particularly in the use of technology as a learning medium. The utilization of digital-based learning media has become essential to meet the needs of the current generation, which tends to be more interactive and independent. This study aims to analyze the needs for economics learning media in the digital era to enhance students' understanding and engagement in the learning process. The research employed a qualitative descriptive method with data collection techniques, including observations, interviews, and questionnaires. The subjects of the study involved 79 tenth-grade students and teachers of economics at SMA Muhammadiyah 1 Sekampung Udik. The results revealed that the majority of students faced difficulties in understanding economics material, with 55.7% stating that learning economics was moderately difficult and 39.2% finding it very difficult. Most students (62%) expressed a strong need for additional learning media, particularly audio-visual-based media, while 44.3% were highly interested in Android-based learning media. Furthermore, the study highlights that the majority of students experience challenges in comprehending economics concepts, indicating a significant demand for digital-based learning media. Audio-visual and Android-based learning media are considered effective in improving flexibility, independence, and students' understanding of complex economic concepts. Therefore, the adoption of interactive and adaptive digital technology-based learning media is a strategic step to support the effectiveness of economics learning in the global era.

INTRODUCTION

Learning media is a vital component of the educational process, functioning as a means to deliver information and facilitate students' understanding of lesson materials. This media not only supports educators in delivering content but also boosts students' motivation to learn. However, in practice, the use of learning media in many educational institutions still faces numerous challenges, such as limited resources, educators' lack of technological proficiency, and a lack of innovation in creating media that aligns with students' needs. Effective learning media can simplify complex concepts, making them easier for students to grasp and thereby enhancing learning effectiveness (Lumbantobing et al., 2023). The digital era has brought significant changes to various aspects of life, including the field of education. In this era, the integration of digital media has become an inseparable part of the learning process (Azis, 2019). The presence of digital technology has unlocked unlimited access to information, enabling students to easily find diverse resources, learn in more interactive and engaging environments, and strengthen communication between teachers and students (Jazilah, 2021; Maelissa et al., 2024; Rizqi, 2023).

In the context of learning, technological advancements have driven the need for flexible media aligned with digital progress. The younger generation, growing up with instant access to information, seeks interactive and engaging learning experiences. The utilization of technology as an online learning medium has drastically transformed the educational landscape, enabling more inclusive and adaptive approaches. This shift demands educational strategies that provide opportunities for individuals to grow and contribute according to their potential, unrestricted by time and location (Farid, 2023).

Digital transformation in education emphasizes the importance of digital platforms as primary tools for delivering content and facilitating communication between students and educators. The presence of digital platforms not only enriches the learning process in higher education but also supports students' personal development by creating more engaging and relevant learning experiences (Joshi & Koirala, 2023; Serwornoo et al., 2024). To make learning more flexible and dynamic, learning media should be accessible through digital devices such as smartphones, tablets, and laptops. This accessibility allows students to learn anytime and anywhere, enabling them to manage their time and learning environment according to their individual needs and learning styles.

Education must adapt to the developments of the digital era, including in economics learning, which plays a crucial role in equipping students with an understanding of economic systems, financial management, and market dynamics (Mihai et al., 2024; Nurmalasari et al., 2024). However, its implementation still faces challenges, such as reliance on traditional methods and the mismatch between theory and practice, which makes it difficult for students to connect the material with real-world situations (Metarini & Rusilowati, 2023). Digital learning offers a solution by providing flexible access, supporting interactive learning, and enhancing students' autonomy through features such as videos, simulations, and quizzes (Fehlmann & Kranich, 2024; Herawati & Marpaung, 2023; Yanuariski, 2024). This technology-based media enables the personalization of the learning experience and enriches students' understanding of complex economic concepts (Indra et al., 2023). Thus, innovative digital-based learning media becomes key in supporting the effectiveness of economics education in the global era.

Several studies have explored the analysis of learning media needs in the digital era to support the learning process. Research by (Ichsan et al., 2018) indicates that the use of digital media in science and environmental education at the elementary to high school levels is still very limited and requires further development. Digital media such as videos, e-modules, and learning applications are considered essential for helping students understand complex material. Additionally, the study emphasizes the importance of media innovation by educators to make learning more engaging, relevant, and interactive. The research recommends the need for training and support for teachers to maximize the use of technology in education. It also highlights the importance for educators to integrate digital technology into teaching to create more adaptive and in-depth learning experiences that meet the demands of the digital era. Meanwhile, research by (Yunus & Fransisca, 2020) indicates that Android-based learning media is highly needed in entrepreneurship subjects at vocational high schools. Another study on the use of Edpuzzle-based learning videos has been shown to enhance critical thinking skills, with 81.3% of teachers and 70.1% of students supporting its development (Hartati et al., 2023). Additionally, a study on the analysis of learning media needs for students and teachers in secondary schools strongly supports the need for e-Comic-based learning media, highlighting a preference for visually engaging content that can improve the understanding of complex concepts (Wani et al., 2023).

Economics learning at SMA Muhammadiyah 1 Sekampung Udik faces increasingly complex challenges, particularly in adapting teaching methods and learning media to the characteristics of students in the technological era. Based on observations at SMA Muhammadiyah 1 Sekampung Udik, students face difficulties in understanding economics material due to the predominant use of traditional and passive digital media, such as printed books and e-books, which are less aligned with modern learning styles that require more interactivity. Although access to technology among students is already very high, with nearly all students owning Android smartphones, the potential of these devices as learning media has yet to be fully

optimized.

Therefore, this study aims to analyze the specific learning needs in that school environment. This serves as an initial step toward designing innovative learning media that is not only relevant to the digital era but also aligned with the needs of students at SMA Muhammadiyah 1 Sekampung Udik.

METHODS

The method used in this study is descriptive qualitative research. The data collection techniques applied include observation, interviews, and student needs questionnaires. Observations were made to directly observe the learning conditions, including student activities, the learning media used, and the learning environment. Interviews were conducted with the economics teachers at SMA Muhammadiyah 1 Sekampung Udik to gather information regarding their experiences, perspectives, and the needs in the learning process. Questionnaires were distributed to students to understand their needs and preferences in supporting more effective learning. This study was conducted at SMA Muhammadiyah 1 Sekampung Udik, with the research subjects consisting of 79 tenth-grade students in economics and the economics teachers. The sample was selected using purposive sampling techniques.

The stages of this study began with collecting data through observations of students' responses in economics learning, the media typically used in learning, and the type of learning media desired by the students for economics. Next, interviews were conducted with teachers to explore the implementation of economics teaching and the challenges faced. In addition, documentation was collected in the form of teaching modules and students' academic performance. Finally, the data was analyzed to identify existing problems and needs, and conclusions were drawn based on the analysis results.

RESULTS AND DISCUSSION

A. Results

In the digital era, the role of educators as creative and innovative facilitators is crucial in developing students' potential. In economics learning, the focus is not only on theory but also on practical application relevant to the needs of the times. The main objective of economics education is not only to achieve final outcomes but also to build deep understanding and relevant skills for the real world. The implementation of economic concepts by students in the context of daily life is the desired outcome of this learning.

Therefore, critical thinking skills and economic understanding must be cultivated in students. This study aims to explore students' responses regarding their learning experiences and needs that align with the characteristics and challenges of the digital era in economics education. An analysis of the needs for implementing the economics learning process is presented to provide an overview of the aspects that support the achievement of effective and relevant learning. The results of the analysis regarding the needs and challenges in economics learning are interpreted in Figure 1 below:

Analysis of the Needs for Implementing the Economics Learning Process



Figure 1. Diagram of the Economics Learning Process

Figure 1 illustrates students' evaluation of the economics learning process conducted in the classroom. Based on 79 responses, 55.7% of students rated the learning process as "Good," while 44.3% rated it as "Very Good." No respondents rated it as "Less Good" or "Not Good." These positive evaluations reflect the success of the economics learning process, supported by students' academic achievements that meet expectations. However, the high dominance of positive assessments suggests that the success of the learning process is still primarily focused on cognitive aspects. Therefore, it is essential to consider a more comprehensive evaluation from students regarding the economics learning process, as this is one of the key factors determining learning success. This evaluation aims to explore students' perspectives on the conducted learning process and identify areas that need improvement to make it more effective and relevant. The results of the needs analysis for educators' evaluation in the economics learning process are presented in Figure 2 below:



Figure 2. Educator Evaluation in the Economics Learning Process

The success of the learning process can be measured through students' evaluations of educators' performance in the classroom. These evaluations provide insights into the effectiveness of teaching methods applied and the extent to which educators can create a learning environment that fosters understanding and engagement. Figure 2 illustrates students' assessments of educators' performance in the economics learning process, based on 79 responses. Of these, 57% rated the educators' performance as "Good," while 43% rated it as "Very Good." No students gave ratings of Less Good or Not Good. This data indicates that the majority of students are satisfied with the educators' performance in economics learning, with all responses reflecting positive feedback. These results suggest that educators have met students' expectations in the economics learning process. However, despite the favorable evaluations of educators' performance, further development of digital-based learning media is necessary to enhance the quality of learning and align it with the demands of the digital era. Additionally, students continue to face challenges in economics learning, which is illustrated in Figure 3 below:



Figure 3. Diagram of Economics Learning Difficulties

In the context of the economics learning process, students also indicated the level of difficulty they experience in understanding classroom material. Based on 79 responses, 55.7% of students rated economics learning as "Moderately Easy," while 39.2% rated it as "Moderately Difficult." A small portion, 6.2%, found it "Fairly Easy," and none rated it as "Very Easy." These

findings highlight that the majority of students face challenges in comprehending economics concepts. This perception serves as valuable feedback for educators to evaluate the need for more effective and interactive learning media, such as the integration of digital technologies and the adoption of more practical teaching strategies. By employing more engaging and relevant approaches, it is hoped that students' understanding of economics material can improve and the difficulties they face during the learning process can be minimized. Given these challenges, there is a strong need for effective and engaging learning media to enhance students' comprehension of economics. The use of appropriate learning media, such as digital technologies, can present material in an interactive and applicable manner, potentially reducing learning difficulties. Figure 4 below illustrates the analysis of the need for learning media in economics:



Figure 4. Diagram of Economics Learning Media Needs

The next aspect to consider is the importance of understanding how students perceive their needs for learning media that can enhance their comprehension of economics. Figure 4 illustrates students' perceptions of their need for supplementary learning media to assist in understanding economics material, based on responses from 79 participants. A significant 62% of students indicated that they "Strongly Need" additional learning media, while 30.4% felt they "Moderately Need" it. Only 7.6% stated they "Slightly Need" such media, and none selected "Do Not Need." Overall, this data demonstrates that the majority of students strongly require supplementary learning media to aid their understanding of economics lessons. These findings highlight the critical importance of employing effective learning media. To further illustrate how economics learning media are utilized by educators, the findings are presented in Figure 5 below:

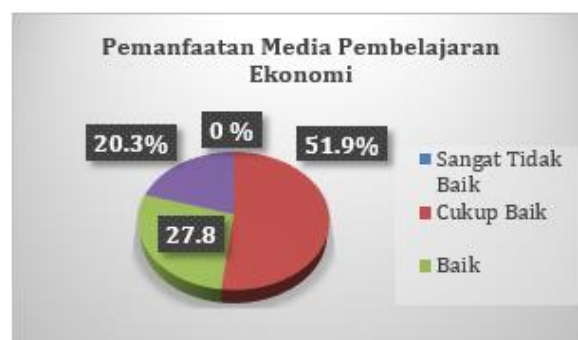


Figure 5. Diagram of the Utilization of Economics Learning Media

The use of learning media by educators needs to be carefully reviewed. Learning media serves as a bridge between educators and students, facilitating communication and aiding in the understanding of complex concepts. Additionally, learning media creates a more engaging learning environment, reduces boredom, and boosts students enthusiasm. (Utami et al., 2023; Yoga & Isroani, 2023). Therefore, learning media plays a crucial role in the learning process, as it can enhance students' motivation, excitement, and interest. Educators need to be trained to select and use appropriate media that align with the learning objectives and meet the needs of the students (Kusuma & Bima, 2023; Yoga & Isroani, 2023).

The diagram in Figure 5 shows students' assessments of the use of learning media by educators in the economics subject. Of the 79 responses, 51.9% stated that the learning media was "Fairly Good," 27.8% rated it "Good," and 20.3% considered it "Very Good," with no responses indicating "Very Poor." This suggests that although the use of learning media is quite effective, there is still room for improvement. The dominance of the "Fairly Good" rating indicates the need for more varied and interactive media, such as videos, digital simulations, and learning applications. This effort is expected to increase students' active engagement and understanding of economic material. By incorporating more innovative media, educators can create a more engaging learning environment that aligns with current needs. This could also boost students' motivation to participate more actively in class. Therefore, it is important to continuously evaluate and develop learning media to make it more effective in supporting enjoyable and quality learning processes. Moreover, the right media can facilitate a more effective understanding of the material by students. An analysis of the media commonly used in economics learning is presented in Figure 6 below:



Figure 6. Diagram of Commonly Used Media

Based on the diagram in Figure 6, it shows the types of media commonly used by educators in economics education, according to 78 student responses. A total of 47.4% of students stated that they use Printed Books as the primary media, followed by Digital Books at 43.6%. Meanwhile, 7.7% of students use Mobile Learning Applications, and none use Animated Videos. This data predominantly indicates that the media used in learning is still dominated by printed and digital books, while the use of more interactive and modern media, such as animated videos or learning applications, remains very limited. This presents an opportunity for educators to integrate more digital and interactive media to enhance student engagement and understanding of economics content. Furthermore, the desired learning concept from the students also plays an essential role in creating a more effective and enjoyable learning experience. The concept of the desired learning media to support economics education is presented in Figure 7 below:



Figure 7. Desired Media Concept

The diagram in Figure 7 illustrates the preferred learning media concepts desired by 79 respondents. The survey results show that the majority of respondents (72.2%) prefer learning media in the form of audio-visual content. Audio-visual media, which combines sound and images, has been shown to significantly enhance students' cognitive understanding during the learning process (Manulang et al., 2023). Meanwhile, 16.5% of respondents chose media in the

form of visuals only, and 11.4% preferred audio-only media. This indicates that the majority of respondents are more interested in media that combine both audio and visual elements, as it is believed to provide a more interactive and immersive learning experience. Therefore, educators may consider optimizing the use of audio-visual media to make the learning process more engaging and effective. Additionally, utilizing varied learning media can create a more dynamic learning environment and increase active student engagement. Furthermore, based on student interest, using Android-based learning media could be an attractive option. The analysis of the need for interest in using Android-based learning media is presented in Figure 8 below:



Figure 8. Interest in Using Android-Based Learning Media

The need for learning media in the digital era is becoming increasingly important, given the rapid technological advancements and the growing access of students to digital devices. The diagram in Figure 10 shows the level of interest of participants in using Android-based learning media according to 79 respondents. As many as 46.8% of participants answered "Moderately Interested," while 44.3% stated they were "Very Interested." In addition, 8.9% of participants felt "Less Interested," and none selected "Not Interested at All." This data shows that the majority of students have a fairly high level of interest in using Android-based learning media, with nearly 91.1% of participants expressing interest. This indicates a significant potential for the development of Android-based learning media to enhance student engagement and participation in the learning process. Therefore, utilizing the Android platform as a learning medium can be an effective alternative to support a more engaging and interactive teaching and learning process.

Moreover, technology-based learning media can significantly enhance student engagement and motivation, making it an ideal choice for creating a more dynamic learning experience (Permana et al., 2024). The use of Android-based learning media in economics education will be more effective in capturing students' interest. Android applications enable two-way communication between educators and students, supporting more active interaction and facilitating better understanding of the material. Furthermore, Android applications align with the characteristics of Generation Z, who prefer challenges, are tech-savvy, flexible, intelligent, and enjoy global connectivity and networking in the virtual world. Therefore, Android-based learning media can address issues and meet the needs of 21st-century education, making it a suitable choice to support a more engaging, efficient, and up-to-date teaching and learning process.

The utilization of Android technology provides easy access to a variety of educational resources, making learning more flexible and adaptable to diverse learning environments (Amini, 2022). The implications of the needs analysis in this study highlight the necessity of developing Android-based learning media as a tool to support the economics learning process. This is expected to enhance student engagement, facilitate access to materials, and create a more interactive learning experience. The use of this media is anticipated to support the development of students' economic skills, better preparing them to face the challenges of the digital era.

B. Discussion

The results of the interview conducted with Mr. Catur Setiawan, A.Md, the economics teacher, revealed that students face challenges in understanding the abstract concepts taught in economics. Based on observations and interviews, it was found that although some learning media have been used, the majority of students feel that these media are not interactive enough and have not fully helped in understanding the material considered difficult. The assessment of the teacher's performance showed positive results, with 57% of students rating it as Good and 43% rating it as Very Good. This reflects the teacher's success in creating a classroom environment that supports learning through interactive approaches and effective communication. However, 62% of students expressed that they strongly need additional media to support their understanding of the material. Most students (72.2%) preferred audio-visual-based media, while 44.3% showed particular interest in Android-based learning media.

Several factors influence the challenges students face in studying economics. The existing learning media have not yet leveraged interactive technologies, such as Android-based applications or animated videos. The difficulty level of the material, which contains many abstract concepts, also presents a barrier for students in deeply understanding the lessons. On the other hand, the availability of technology among students is quite high, with 98% owning Android smartphones. This situation presents a great opportunity to develop more relevant digital media. Students' preferences for interactive learning media highlight the importance of innovative approaches that support economics learning in the digital era.

The findings of this study emphasize that the use of digital technology is crucial in enhancing the quality of learning. This aligns with the research conducted by which shows that integrating digital-based technology into the learning process can increase student engagement and encourage better learning outcomes through interactive and varied media. Additionally, students strongly need Android-based learning media, with 94.23% of respondents agreeing that the use of this media makes the learning process more enjoyable and effective. This study also highlights the importance of maximizing the use of available technologies in schools, such as the internet and digital devices, to support modern learning needs (Monica, 2020). Although the performance of educators has received excellent evaluations, the integration of digital-based learning media is an important step in improving the effectiveness of economics education. The use of this media can help students understand complex concepts while preparing them to face the challenges of a technology-driven modern world.

Therefore, educators are expected to optimize the use of digital technology to create a learning experience that is more relevant, interactive, and adaptive to the needs of students in the digital era. This study provides practical recommendations for educators to enhance the use of technology in teaching and to prepare students to face the challenges of an increasingly technology-driven world.

CONCLUSIONS AND SUGGESTIONS

A. Conclusions

Economic education needs to transform in line with the rapid advancements in technology, particularly in the context of the digital era. The existing learning systems should be adapted to meet the challenges faced by students in the modern age. The study conducted at SMA Muhammadiyah 1 Sekampung Udik revealed that, although educators have applied effective teaching methods and used various learning media, there is still a need to adjust these media to better align with the characteristics of today's students. This research highlights that digital-based media, such as Android-based learning applications, are the most relevant and effective options to support the economic learning process. These media not only provide easily accessible and flexible materials but also foster more active interaction between students and the learning content. The use of digital media allows students to have a more engaging learning experience, tailored to the needs of the digital era. Furthermore, students' preference for audio-visual media, which has been proven to enhance the understanding of economic concepts more profoundly, further emphasizes the urgency of utilizing technology-based learning media.

Therefore, the development of innovative digital media becomes a crucial step in improving the quality of economic education.

B. Suggestions

To enhance the quality of economic education in the digital era, it is recommended that educators actively integrate technology-based learning media, such as Android-based applications. The use of these media should be tailored to the characteristics of today's students, who prefer interactive learning experiences. Additionally, educator training in the use of digital media should be improved to enable them to optimize its effective use in the learning process.

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