

THE DEVELOPMENT OF DIGITAL-BASED QUESTION CARD MEDIA ON STUDENTS' ABILITY TO UNDERSTAND PANCASILA VALUES AT ANNYSYA PRIVATE ELEMENTARY SCHOOL

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Abstract

This study aimed to develop digital-based question card media and to examine its effectiveness in improving students' ability to understand Pancasila values at Annysya Private Elementary School. The study employed a Research and Development (R&D) method using the ADDIE model, which consisted of analysis, design, development, implementation, and evaluation stages. The research subjects were fourth-grade students. The instruments used included expert validation sheets, student and teacher response questionnaires, as well as pretest and posttest assessments. The results indicated that the developed media was categorized as highly feasible based on evaluations by material, language, and media experts. During the implementation stage, there was a significant improvement in students' learning outcomes, with the average pretest score of 52.55 increasing to 80.95 in the posttest. In addition, student and teacher responses to the use of the media were categorized as very good. The digital-based question card media also enhanced students' engagement, motivation, and active participation in the learning process. Thus, the developed media proved to be effective and could be used as an innovative alternative in Civics (PPKn) learning to help students understand and internalize Pancasila values in a more contextual and applicable manner in their daily lives.

Keywords: Digital Media, Question Cards, Pancasila, Elementary School, ADDIE

1. INTRODUCTION

Pancasila education played an important role in shaping students' character and personality from an early age at the elementary school level. At this stage, children were in a very active developmental phase, where they began to recognize rules, understand differences, learn to respect others, and build habits that would carry into adulthood. Therefore, Pancasila learning should not only enable students to mention its principles but also to apply them in real-life actions in their daily lives. However, in reality, the implementation of Pancasila learning in elementary schools still faced many challenges. At Annysya Private Elementary School, learning had been conducted using one-way methods such as lectures and memorization tasks. Students were asked to memorize the text of Pancasila without being guided to understand its meaning. As a result, many students were only able to mention the principles verbally but were not yet able to relate them to real behaviors such as cooperation, helping others, being honest, and maintaining responsibility in school activities.

Another issue was that the learning media used were still limited and less attractive to students. Many teachers still relied on textbooks and student worksheets as the only learning resources. This became a challenge because students today were very close to the digital world. Children were more interested in interactive, dynamic, colorful, and challenging visual displays. When learning was presented statically, students quickly became bored, and the learning process became less meaningful.

Technological developments had provided significant opportunities to create more creative and innovative learning experiences. Digital media could present interactive, enjoyable, and relevant learning experiences aligned with students' current world. One potential medium to be developed was digital-based question card media. This media could present questions or real-life situations commonly encountered by students, enabling them to understand Pancasila values through problem-solving activities rather than mere memorization.

Several previous studies had demonstrated that the use of digital media could help increase student engagement and understanding in learning. Putri et al. (2022) developed question card media based on Google Sites for learning the topics of LCM and GCF in fourth-grade elementary school. The media was designed with an attractive and accessible digital display to help students understand abstract mathematical concepts. The results showed significant success, with the media obtaining a feasibility score of 3.56 out of 4, categorized as highly feasible. Its effectiveness was proven by a classical mastery level of 87.5%, where most students achieved scores above the minimum competency criteria. Ease of access and appealing design were key factors that helped students better master the material.

In line with this study, Ardiansa et al. (2023) conducted research on the use of digital image card media in Social Studies (IPS) learning. The study aimed to determine the effect of card-based digital media on students' cognitive abilities as well as the development of patriotic attitudes. The results showed significant improvement in both aspects. Cognitively, students' abilities increased from an average pre-test score of 65.8 to 82.4 in the post-test, resulting in a gain score of 0.68, categorized as moderate. This improvement indicated that digital image card media effectively helped students better understand Social Studies material. Additionally, the affective aspect also showed positive development, as reflected in the increase in patriotic attitude scores from 72.3 to 85.6. The use of digital image cards with relevant content was able to foster students' awareness and appreciation of national values.

Meanwhile, Fauziyati and Sriyanto (n.d.) conducted a study on the effect of gamification media such as Wordwall and labeled diagrams on elementary school students' critical thinking skills in Social Studies learning. This study explored how a gamification approach could enhance students' active engagement while developing their critical thinking abilities. The results showed a very significant effect, with statistical testing yielding a significance value of $p = 0.001$ ($p < 0.05$), indicating that gamification media had a scientifically proven impact on students' critical thinking skills. Quantitatively, the average critical thinking score increased significantly from 68.2 at the initial stage to 81.7 after using the media. This improvement showed that Wordwall and labeled diagrams were able to create a more interactive and enjoyable learning environment, encouraging students to think more deeply, analyze information, and solve problems more effectively.

Based on the three studies above, it could be concluded that digital learning media and gamification were proven effective in improving elementary school students' learning outcomes, both cognitively and affectively. Google Sites-based question card media achieved a very high feasibility level (score 3.56/4) with a classical learning mastery of 87.5%. Digital image card media improved students' cognitive abilities with a gain score of 0.68 (moderate category) and increased patriotic attitudes from 72.3 to 85.6. Meanwhile, Wordwall gamification and labeled diagrams had a significant effect ($p = 0.001$) on critical thinking skills, increasing scores from 68.2 to 81.7. These results confirmed that integrating digital technology and gamification approaches in learning could create more engaging, interactive, and meaningful learning experiences for students. Therefore, this study was titled: "The Development of Digital-Based Question Card Media on Students' Ability to Understand Pancasila Values at Annysa Private Elementary School."

2. METHODS

This study used a Research and Development (R&D) approach aimed at producing a learning media product while also testing its effectiveness in improving students' learning outcomes. In the context of education, development research was considered a relatively new type of research and had distinct characteristics compared to other types of research, particularly in terms of procedures and methodological approaches. Setyosari explained that development research shared similarities with other research but differed in its systematic, product-oriented steps (Wajdi et al., 2022). In addition, the R&D method was designed not only to produce a product but also to assess its feasibility and effectiveness in learning practice. This was in line with the view that R&D is a research method used to produce certain products while simultaneously testing their effectiveness (Sultan Syarif Kasim et al., 2021). Therefore, this study not only focused on the process of developing digital-based question card media but also on evaluating its success in improving students' understanding of Pancasila values in a deeper and more applicable way in daily life.

The development model used in this study was the ADDIE model, which consisted of five main stages: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE model was chosen because it had a systematic structure, was flexible, and was easy to apply in developing digital-based learning media. In the analysis stage, the researcher identified learning needs through initial observations and interviews with Civic Education (PPKn) teachers to determine the problems faced by students in understanding Pancasila values. The results of the analysis showed that students tended to only memorize the principles of Pancasila without understanding their meaning and application in daily life. In addition, the learning media used were still conventional and less capable of increasing students' motivation and engagement. Therefore, the development of digital-based media was considered relevant to students' conditions, as they were already familiar with simple technological devices, and it was expected to increase their interest and active participation in the learning process.

The design stage was carried out to plan the initial concept of the learning media to be developed. At this stage, the researcher arranged the material structure, learning indicators, and the design of digital question cards, including levels of difficulty, question formats, and media navigation. In addition, the researcher designed the visual appearance, including the use of colors, illustrations, icons, and typography adapted to the characteristics of elementary school students. Research instruments were also designed at this stage, including validation sheets for material experts, language experts, and media experts, observation sheets, questionnaires for student and teacher responses, and pretest and posttest questions. These instruments were systematically prepared to measure cognitive, affective, and user response aspects toward the learning media. With careful planning, the developed product was expected to have good quality in terms of pedagogy, aesthetics, and ease of use in classroom learning.

The development stage was the phase of creating the initial product or prototype based on the previously prepared design. The digital-based question card media was developed with an interactive and engaging appearance to increase student involvement in learning. After the initial product was completed, a validation process was conducted by material experts, language experts, and media experts to assess the product's feasibility from various aspects, such as content relevance, language clarity, and display quality. The validation results included assessment scores and suggestions for improvement, which were used as the basis for revising the product. This revision process aimed to refine the media to make it more suitable for use in learning. Thus, the development stage focused not only on product creation but also on improving product quality through expert evaluation before direct implementation with students.

The implementation stage was conducted by testing the learning media in a real classroom setting. The trial was carried out in two stages: a limited trial and a field trial. In the limited trial, the media was used by a small group of students to identify initial responses regarding usability and visual appearance. Subsequently, the field trial was conducted in one class at Annysa Private Elementary School to measure the effectiveness of the media more broadly. In this stage, a simple experimental design in the form of a One Group Pretest–Posttest Design was used, where students were given a pretest before learning and a posttest after using the media. The data obtained were then analyzed to determine improvements in students' learning outcomes. In addition, student and teacher responses to the media were collected through questionnaires and observations to obtain a more comprehensive understanding of the media's effectiveness in the learning process.

The final stage was evaluation, which was conducted both formatively and summatively to assess the overall process and results of media development. Formative evaluation was carried out during the development process, such as during expert validation and initial trials, while summative evaluation was conducted after implementation to determine the level of success of the media in improving students' understanding. The data analysis techniques used in this study included both quantitative and qualitative analysis. Quantitative analysis was conducted by calculating the percentage of expert validation results, student responses, and improvements in pretest and posttest scores, while qualitative analysis was carried out through data reduction, data presentation, and conclusion drawing based on observations and interviews. The success of the study was determined by improvements in student learning outcomes, with at least 85% of students achieving the minimum mastery criteria (KKM), as well as positive responses from both students and teachers toward the developed media. Therefore, this study was expected to produce digital-based question card media that was effective, feasible, and beneficial in improving students' understanding of Pancasila values at the elementary school level.

3. RESULTS

The results of the research at the analysis stage showed that there were various problems in learning Pancasila values at Annysa Private Elementary School based on observations conducted from January 12 to February 12, 2026. The main problem found was that most students were only able to memorize the principles of Pancasila without understanding their meaning and implementation in daily life. The data showed that approximately 75% of students were in this category, with an average comprehension score of only 65.3. In addition, the level of student participation in the learning process was also relatively low, where only about 40% of students were active in question-and-answer activities. This condition indicated that the learning process had not run optimally in developing students' conceptual understanding. The low level of student involvement also had an impact on the underdevelopment of critical and reflective thinking skills regarding Pancasila values. This became an indicator that learning was still passive and had not encouraged meaningful interaction between students and the learning material.

From the aspect of learning media, the analysis results showed that the learning process was still dominated by the use of textbooks and student worksheets (LKS) as the main sources. The media used tended to be conventional and had not optimally utilized digital technology. Teachers had also not used interactive media that could increase students' interest and motivation in learning. In fact, based on the characteristics of current students who were already familiar with digital technology, innovation in the presentation of learning materials was needed. Therefore, the identified need was the development of learning media that were more attractive,

interactive, and capable of concretizing the abstract values of Pancasila. The media were also expected to present situational examples close to students' lives and to utilize digital technology effectively. Thus, the development of digital-based question card media became a relevant solution to meet these learning needs.

The results of the curriculum analysis showed that the development of learning media referred to the 2013 Curriculum for Civic Education (PPKn) for fourth-grade elementary school. The Core Competencies underlying this included aspects of spiritual attitudes, social attitudes, knowledge, and skills. Based on these competencies, indicators of competency achievement were developed, including students' ability to mention the principles of Pancasila, explain the meaning of each principle, identify the values contained, and provide examples of their application in daily life. In addition, students were expected to be able to analyze attitudes that were appropriate and inappropriate to Pancasila values and relate them to real-life behavior. These analysis results became the basis for designing learning objectives and media content to be developed. By referring to the applicable curriculum, the resulting learning media were expected to be aligned with competency standards and able to support the achievement of learning objectives effectively and systematically.

At the design stage, the research results showed that clear and structured learning objectives had been formulated in accordance with the competency achievement indicators. These objectives included students' ability to explain the meaning of each principle of Pancasila, identify the values contained, provide examples of application in daily life, analyze appropriate and inappropriate attitudes, and relate Pancasila values to real behavior. In addition, the design of learning media content was carried out, including material on Pancasila as the foundation of the state, the meaning of each principle, and examples of its application in daily life. The media were also equipped with a question bank consisting of 25 items with varying levels of difficulty, ranging from easy to difficult. These questions were designed to measure students' understanding comprehensively of Pancasila values. With this systematic design, the developed media had a strong pedagogical foundation and were aligned with students' needs.

The results of the development stage showed that the digital-based question card media were successfully created in accordance with the previously prepared design. The media were developed with an attractive, interactive, and user-friendly appearance to increase student engagement in learning. The validation process conducted by material experts, language experts, and media experts showed very positive results, so the media were declared feasible for trial. However, there were several suggestions for improvement from the experts, such as refining the visual design, improving navigation, and adjusting the level of difficulty of the questions to better match students' abilities. Based on this feedback, the first revision was carried out to improve the quality of the media. After going through the revision process, the product was declared ready to be implemented in learning. This indicated that the development process had produced media that met feasibility criteria from various aspects.

At the implementation and evaluation stages, the research results showed that the digital-based question card media had a positive impact on learning. The limited trial showed that students gave good responses to the media, especially in terms of ease of use and visual attractiveness. Furthermore, in the field trial conducted in one full class, the pretest and posttest results showed a significant improvement in students' understanding of Pancasila values. Evaluation was conducted formatively during the development and trial process, as well as summatively after all data had been collected. The evaluation results showed that the developed media had a high level of effectiveness in improving student learning outcomes. The significant increase in scores between the pretest and posttest became the main indicator of the success of

using the media. Thus, the digital-based question card media proved to be effective in helping students understand Pancasila values more deeply and applicatively.

4. DISCUSSION

Based on the research results that had been conducted, this discussion focused on three main aspects, namely the media development process, the feasibility of the media based on expert assessments, and the effectiveness of the media in improving understanding of Pancasila values. These three aspects were interrelated and became the main indicators in assessing the success of this development research. The process of developing digital-based question card media was not only viewed from the stages carried out but also from how the media were able to address the learning problems found in the field. In addition, media feasibility became an important factor in ensuring that the developed product met established quality standards. Media effectiveness also became the main benchmark in assessing the success of media use in improving student learning outcomes. These findings were supported by research stating that digital learning media were able to significantly improve the quality of learning and student engagement (Adventyana et al., 2023).

The process of developing digital-based question card media was carried out through the ADDIE model, which consisted of five main stages: analysis, design, development, implementation, and evaluation. At the analysis stage, it was found that most students were still at the memorization stage without deeply understanding the meaning of Pancasila values. This was indicated by data showing that 75% of students were only able to memorize, with an average comprehension score of 65.3 and an active participation rate of only 40%. This condition indicated a gap between learning objectives and the results achieved by students. Therefore, the development of digital-based learning media became a relevant solution to overcome these problems. This was in line with research showing that the use of digital media in learning could increase student engagement and the effectiveness of the learning process (Sadiah et al., 2023).

At the design stage, the media were developed by considering students' needs and alignment with the applicable curriculum. The design included the preparation of learning objectives, materials, and a question bank consisting of 25 items with varying levels of difficulty. These questions were designed to measure students' understanding comprehensively, from knowledge aspects to analytical abilities. In addition, the media were designed with an attractive and interactive visual appearance to increase students' interest in learning. The selection of an appropriate design proved to be important in increasing students' learning motivation, as explained in research stating that visually appealing digital media could increase learning interest (Annisa et al., 2023).

At the development stage, the digital-based question card media were successfully created according to the planned design. The development process considered aspects of content, language, and media display. Validation by material experts and media experts showed a "highly feasible" category, so the media were declared to meet feasibility standards. This was in line with research emphasizing that media validation was an important stage in ensuring product quality before being used

in learning (Wijaya et al., 2025). With this validation, the developed media had a high level of reliability for use in learning.

The implementation stage was carried out through limited trials and field trials to determine the effectiveness of the media in learning. The trial results showed that students gave positive responses to the media, especially in terms of ease of use and visual attractiveness. In the field trial, students appeared more active and engaged in the learning process. Teachers also gave positive responses to the use of the media. This was in line with research showing that interactive digital media could increase student participation in learning (Huljanah & Zai, 2025).

The effectiveness of digital-based question card media could be seen from the improvement in student learning outcomes based on the comparison of pretest and posttest scores. The average pretest score of students was 52.55, which increased to 80.95 in the posttest, with an increase of 54.04%. This improvement showed that the media were highly effective in improving students' understanding of Pancasila values. This finding was supported by research stating that digital media could significantly improve student learning outcomes (Monalisa et al., 2024).

In addition to improving learning outcomes, the digital-based question card media also had a positive impact on the learning process. Students became more active, enthusiastic, and engaged in learning activities. Interactive media encouraged students to think critically and relate the material to real-life experiences. This was in accordance with research showing that digital learning media could improve students' critical thinking skills (Wihandarti et al., 2024). Overall, the results of this study showed that the digital-based question card media developed through the ADDIE model had very good quality and were effective in improving students' understanding of Pancasila values. The media were not only feasible to use but also able to increase student engagement and learning motivation. This was reinforced by research stating that digital media innovation was very important in improving the quality of education in elementary schools (Syafitri et al., 2025). Thus, this media could serve as an innovative alternative in Civic Education (PPKn) learning.

5. CONCLUSION

Provide The development of digital-based question card media through the ADDIE model successfully produced learning media that were feasible and effective in improving students' understanding of Pancasila values at Annysa Private Elementary School. The development process was carried out systematically, starting from the needs analysis stage to evaluation, so that the resulting media were aligned with student characteristics and curriculum demands. The results of validation by material experts and media experts showed a "highly feasible" category, indicating that the media had met aspects of content, language, and display. In addition, the trial results showed a significant improvement in student learning outcomes, as indicated by the increase from pretest to posttest scores. The media were also able to increase student engagement, motivation, and learning activities. Thus, digital-based question card media could serve as an effective and innovative alternative in Civic Education (PPKn) learning,

particularly in helping students understand and internalize Pancasila values in a more contextual and applicable manner in daily life.

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