

DEVELOPMENT OF A FLIPBOOK-BASED E-MODULE FOR PANCASILA EDUCATION TO IMPROVE LEARNING OUTCOMES OF GRADE IV STUDENTS AT SD SWASTA KARTINI MEDAN AREA

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Abstract. This study aims to develop a flipbook-based e-module for Pancasila Education that is valid, practical, and effective in improving learning outcomes for Grade IV students at SD Swasta Kartini. This research applies the Research and Development (R&D) method using the 4D development model. The research results show: (1) Validity was determined through expert validation. Subject matter experts gave a score of 83% (Valid with revisions) in the first stage and 88% (Highly Valid) in the second. Media experts scored 65% (Fair with revisions) initially and 93% (Highly Valid) after revision. Language experts gave 83% (Fair with revisions) at first and 96% (Highly Valid) after improvements. (2) Practicality was assessed through questionnaires distributed to teachers and students. The teachers' practicality score was 95% (Highly Practical), while students' responses reached 87% (Highly Practical). (3) Effectiveness was measured using the n-gain test, with a result of 0.71 (Very High), indicating a significant improvement in student learning outcomes. The conclusion is that the developed flipbook-based e-module for Pancasila Education is valid, practical, and effective in enhancing students' learning achievements in the subject of Pancasila Education.

Keywords: e-module; flipbook; learning outcomes; Pancasila education

I. INTRODUCTION

Education is very important for human life, education should be carried out as well as possible in the learning process, both at school and in the environment where they live. According to Law Number 20 of 2003 Article 1 concerning the National Education System, education is a conscious and structured effort to create a learning and learning atmosphere so that students actively develop the potential that exists within them to have spiritual, religious, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state. Therefore, education can change and improve the quality and quality of Human Resources so that it can compete with other developed countries.

Education plays an important role in helping humans develop the potentials that exist within them, as well as contributing to improving the quality of human resources. This is done by encouraging individuals to learn and providing adequate facilities during the learning process, especially in teaching and learning activities that are carried out directly [1].

The development of science is actually inseparable from deep curiosity, accompanied by earnest effort through the process of reasoning, experimentation, refinement, and the courage to take great risks. This results in discoveries that are beneficial to one generation and become the foundation for the next generation to make corrections, refinements, developments, and create new discoveries. These factors then

became the enthusiasm and motivation for the rapid advancement of science and technology [2]. Pancasila character education is a conscious effort by a person to instill the values of Pancasila in students so that they become individuals with noble character, virtuous and have insight into their own country [3]. The role of Pancasila Education is very significant in shaping the character of students in Indonesia by instilling noble values that are the basis of the state as well as moral guidance for the community.

Based on the results of observations at Kartini Private Elementary School, it was found that the learning outcomes of grade IV students in the Pancasila Education subject were still low in the 2023/2024 academic year in the first semester with an average score of 65 and in the even semester with an average score of 71. This can be seen from the value of tasks and daily life of students who have not reached the Minimum Completeness Criteria (KKM), which shows that students' understanding of the material, especially the value of mutual cooperation, is still lacking.

The problem is not only seen from the cognitive aspect, but also from the lack of application of the value of mutual cooperation in the daily lives of students. During the Clean Friday activity which is held once a month, there are still many students who choose to play or not actively participate, even though this activity has been socialized as a shared responsibility by the school. This shows that the learning

carried out is not fully. The results of interviews with teachers show that the use of digital-based media is minimal and depends on conventional methods.

Learning is a process that involves changes in individual behavior [4]. These changes occur as a result of a person's practice or experience. In addition, changes that occur through the learning process must be relatively permanent or steady in order to be considered as learning outcomes. According to Gagne, learning is something that happens naturally, but only occurs under certain conditions of experiencing a relatively permanent change in ability, as a result of practice and experience [5]. In the context of education, learning is at the core of the entire learning process. Effective learning must actively engage learners, both physically and mentally. Therefore, the learning approach used by teachers must be able to create an interesting, challenging, and meaningful learning situation for students.

Learning outcomes are the results that have been achieved by students after they participate in learning activities. The results achieved by the student can be in the form of abilities, both related to aspects of knowledge, attitudes, and skills possessed by the student after he or she receives the learning experience [6]. Meanwhile, according to Setiawati, learning outcomes are behavioral changes that include cognitive, affective, and psychomotor fields [7]. In line with the understanding, according to Nurrita, learning outcomes are the results given to students in the form of assessments after participating in the learning process by assessing the knowledge, attitudes, and skills in students with changes in behavior. [8].

Modules are teaching materials that are specially designed, systematic, and equipped with instructions that contain learning experiences by organizing subject matter that allows learning independently or guided [9]. Modules are teaching materials that present a series of planned learning experiences. Each learning activity in the module is specifically designed to provide opportunities for students to actively interact with learning materials. The ultimate goal of all this series of activities is for students to master the subject matter well [10].

There are two commonly used types of modules: electronic modules and print modules. A print module is a module of learning material that is printed in physical or printed form, such as a book. The use of print modules tends to be more traditional and has limitations in terms of interactivity because learners can only read existing texts without multimedia [11].

Flipbooks are interactive media designed to present a more attractive view of PDF files, resembling a physical book with a page-flipping effect. With this feature, readers can experience a more realistic reading experience. In addition, flipbooks allow the integration of various multimedia elements, such as animations, images, videos, and audio, thus making the content more dynamic and interactive. According to Ismail, flipbook-based e-modules are innovations in education that combine the ease of digital access with interactive elements, making them an effective tool in learning [12]. Flipbook-based e-modules are digital forms of modules presented in flipbook format, providing users with an interactive and visual experience. Flipbooks allow readers to flip through pages like physical books, increasing appeal and engagement.

Pancasila education has a crucial role in shaping the character of the Indonesian nation. The learning process aims to instill the noble values of Pancasila in depth in each individual from an early age. In other words, Pancasila Education is a conscious and planned effort to foster awareness of the importance of Pancasila values as the foundation of our country. Sudarminta stated that this learning is a structured process to help students not only understand the concept of Pancasila intellectually, but also be able to appreciate and implement these values in daily life [13].

Based on the analysis of needs and field findings, it is necessary to develop innovative interactive learning media to overcome the low Pancasila Education subject among Grade IV students at SD Private Kartini Medan Area. The use of flipbook-based e-modules in media development is a strategic choice because it integrates visual, audio, and interactive controls to enhance students' comprehensive understanding of the material. This media is expected to help teachers in delivering gotong royong material in a more fun and meaningful way, thereby increasing students' motivation and academic achievement. Given this urgency, the current study is entitled "Development of Flipbook-Based Pancasila Education E-modules to Improve the Learning Outcomes of Grade IV Students of Kartini Private Elementary School Medan Area."

II. RESEARCH METHOD

This research uses a Research and Development (R&D) approach which aims to produce a flipbook-based Pancasila Education e-module to improve the learning outcomes of grade IV students of SD Private Kartini Medan Area. According to Sugiono, Research and Development (R&D) is a research method used to produce certain products and test the effectiveness of these products. The main goal is to develop new products or improve existing products by continuing to test the effectiveness, feasibility and practicality of the product [14].

The research was conducted at Kaartini Private Elementary School Medan Area which is located on Amaliun Street No. 157, Medan Area District, Matsum II City Village, North Sumatra Province, during the even semester of the 2024/2025 school year. This research involved 15 fourth-grade students and four expert validators, consisting of subject matter experts, media experts, linguists, and homeroom teachers who acted as practitioners.

This study uses a 4D development model developed by Thiagarajan which consists of four phases: Define, Design, Develop, and Deploy. The Define stage includes a needs analysis conducted through classroom observation and teacher interviews to identify learning problems and instructional gaps. This stage also involves student analysis, assignment analysis based on Learning Outcomes and Learning Objectives.

The Design Stage involves the development of the Pancasila Education e-module, alignment of teaching materials with the Independent Curriculum, and the preparation of evaluation instruments, including validation questionnaires and pretest-posttest items. At the Develop stage, the product is validated by subject matter, media, and language experts. The validation results guide the revision, which is followed by field testing to determine effectiveness and practicality. The final

stage, Disseminate, consists of a limited distribution of the product among teachers in the same school.

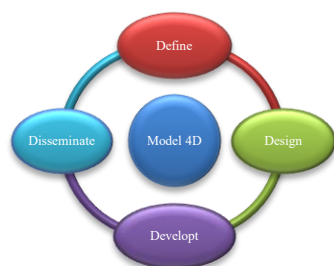


Figure 1 Development of 4D Models

The Pancasila Education e-module is made using the Canva application, after the draft of the e-module is ready to be entered into the flipbook application, this application displays interesting components and is easy to navigate by students. The instruments used in this study included interviews, expert validation, practicality questionnaires for students and teachers and pretest-posttest questions. Validation assessments are assessed using a four-point scale, ranging from "very poor" to "very good", to determine the feasibility of the product. The validation of these findings uses a descriptive qualitative method to analyze the observation data and interviews conducted. Furthermore, it uses quantitative methods applied to manage questionnaire data and pretest-posttest questions.

Data collection methods include observation, interviews, questionnaires and tests. Observation is an observation activity on an object to obtain information, be it data, phenomena about the object [15]. An interview is a conversation process carried out by a person with a specific purpose but according to guidelines and can be face-to-face or through certain communication tools [16]. A questionnaire is a data collection tool in the form of a series of written questions asked to the subject to get a written answer [17]. In the book written by Ana according to Arikunto and West Java, Tests are tools or procedures used to know or measure something using predetermined methods or rules [18]

Through a structured 4D development process, this research aims to produce learning media, especially e-modules that are feasible, practical and effective to improve the learning outcomes of grade IV students of SD Kartini Private Medan Area. By using this media, students contribute to educational technology that is in accordance with the Independent Curriculum at the elementary school level.

III. RESULTS AND DISCUSSION

The results and discussion in this study present a systematic explanation of the process of developing and evaluating flipbook-based Pancasila Education e-modules which aim to improve the learning outcomes of grade IV students of SD Kartini Private Medan Area. By applying the 4D development model, namely Define, Design, Develop, and Disseminate. This development model describes each stage in detail starting from needs analysis, student analysis, learning background analysis, media design, expert validation and testing of effectiveness,

feasibility and practicality so that it can be disseminated in a limited way.

A. Define

At this stage of analysis, the activities carried out aim to identify and understand the problems that occur to students during the learning process, especially in the subject of Pancasila Education gotong royong material. This is important in order to obtain a more detailed picture of the obstacles, difficulties, and learning needs of students, so that later it can be used as a reference and consideration in the next stage. When the initial observation was made found in the learning activity, the teacher used a conventional method so that students only listened to what the teacher said, they could not ask questions or understand what the teacher said.


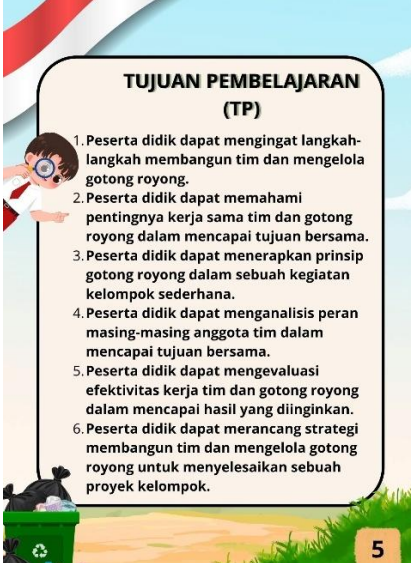


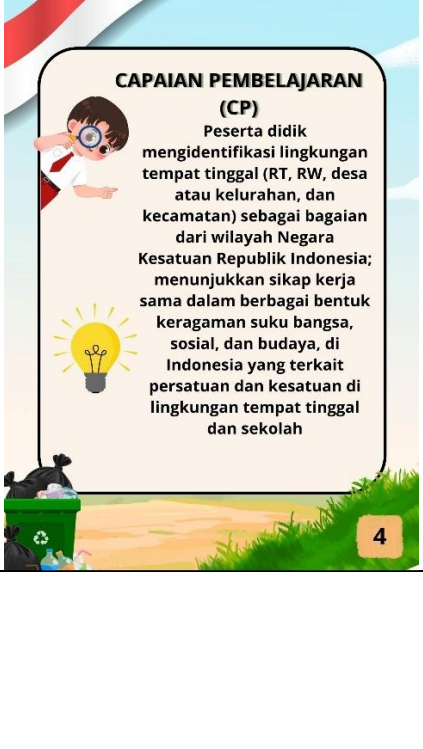

The results of interviews with the fourth grade homeroom teacher at Kartini Private Elementary School Medan Area, information was obtained that teachers found it difficult to teach Pancasila Education subjects on mutual cooperation materials, this was due to the lack of facilities and learning resources provided by the school. The existence of this difficulty affects the learning outcomes of students in the Pancasila Education subject class IV which is seen from daily values such as the value of tasks or homework and the lack of self-awareness to carry out mutual cooperation activities. This makes the learning objectives set have not been achieved optimally.

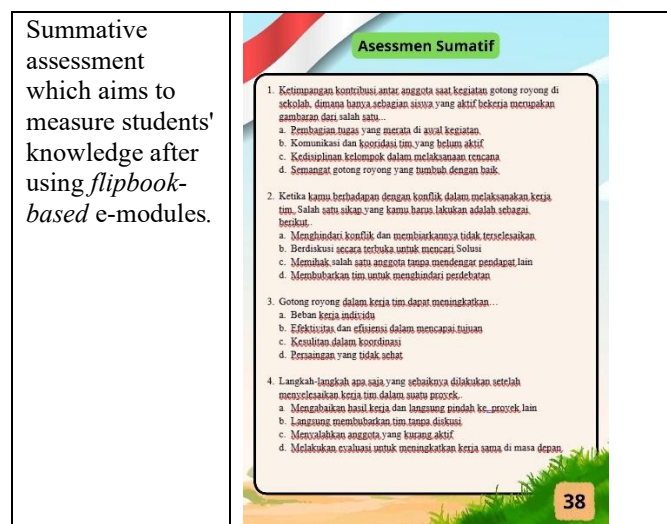
Based on the results of observations that have been carried out at Kartini Private Elementary School in Medan Area, it can be seen that students are more interested in learning when using electronic media, such as infocus, laptops, or computers. This happens because the use of technology can make the learning process more lively, interactive, and in accordance with the learning needs of current students. In addition, based on these observations, the use of electronic media is also considered to be able to support the implementation of the Independent Curriculum.

B. Design

The purpose of this design stage is to design an initial draft of a flipbook-based Pancasila Education e-module. In the design process, the steps taken include determining the media, format, and initial design of the e-module, which is then realized with the help of the Canva application. The design is adjusted to the content of the learning material, then the initial file produced is uploaded and converted into a flipbook that can be accessed digitally.

The flipbook-based Pancasila Education e-module that will be developed later will not only present material in the form of text, but also be equipped with images, videos, and instructions for use. The following is the design of the flipbook-based Pancasila Education e-module

<p>The front cover display of the flipbook-based Pancasila Education e-module contains the identity of the book including the title, author, subject and related material.</p>		<p>The learning objective, which is the purpose of this teaching is to find out what are the goals that will be achieved in this flipbook-based e-module.</p>	
<p>Instructions for using the Pancasila Education e-module.</p>		<p>The table of contents contains anything that will be explained in this Pancasila Education e-module.</p>	
<p>Learning outcomes (CP) to inform what learning outcomes must be achieved after studying the material.</p>		<p>There is material on the discussion of mutual cooperation which is presented in the flipbook-based Pancasila Education e-module.</p>	



Summative assessment which aims to measure students' knowledge after using *flipbook-based* e-modules.

C. Develop

1. Feasibility Testing

The feasibility of the media was assessed by three expert validators of materials, design and language.

- The material expert validator of the product material quality assessment in phase I received a percentage of 83% of feasible achievements, then corrected and reassessed and the results of the phase II assessment received a percentage of 88% of very feasible achievements.
- Expert validators of media design to assess the technical quality aspects of the developed product. The results of the product technical quality assessment in phase I received a percentage of 65% of the achievement adequate, then improved and re-evaluated and the results of the phase II assessment received a percentage of 93% of the achievement was very feasible.
- Linguist validator The results of validation performed by linguists to assess the language used in the product. The results of the language assessment in phase I received a percentage of 83% of feasible achievements, then corrected and reassessed and the results of the second phase assessment received a percentage of 96% of very feasible achievements.

2. Practicality Test

The practicality test was assessed through a questionnaire filled out by grade IV teachers and students.

- The trial of teachers obtained a percentage of 95% with very practical achievements. From this percentage, it can be concluded that the flipbook-based Pancasila Education e-module developed is very practical to use during learning activities.
- The results of the trial conducted on grade IV students with a percentage of 87% of the achievement are very practical

3. Effectiveness Test

To determine the level of effectiveness of the product that has been developed, it is assessed on the learning outcomes of students whose improvement is measured, namely:

- The learning outcomes of the affective domain assessed by students using a self-assessment questionnaire obtained an

average score of 31 with a percentage of 80% on good achievements.

- The learning outcomes in the psychomotor domain obtained an average score of 35 with a percentage of 89% on very good achievements.
- The learning outcomes of students in the cognitive realm were found to be pretset learning results carried out on 15 students obtained an average score of 62 with completeness of only 27%. After the learning process using a flipbook-based Pancasila Education e-module and a post-test was carried out, the students' scores increased to an average score of 89 with a completeness of 93%.

After obtaining the student's learning outcome score, a gain test was calculated and a result of 0.71 was obtained which was included in the high category. So it can be concluded that using flipbook-based Pancasila Education e-modules can effectively improve students' learning outcomes.

D. Disseminate

The final deployment stage was carried out after the flipbook-based Pancasila Education e-module was improved based on the results of trials and input obtained from teachers and grade IV students of SD Private Kartini Medan Area. After going through the stages of revision and refinement, the e-modules that have been adjusted to the learning needs are then applied more widely in classroom learning activities. In this dissemination process, grade IV teachers play the role of the main managers who guide students in using flipbook-based Pancasila Education e-modules as learning media. Teachers are first given explanations related to the structure, content, and use of interactive features available in flipbook-based Pancasila Education e-modules, such as learning video links, practice questions, and reflective activities. This flipbook-based Pancasila Education e-module is used both individually and in groups, by utilizing digital devices such as laptops, tablets, or smart phones connected to the internet network. The use of flipbook-based Pancasila Education e-modules in learning activities was observed directly to see the response and involvement of students. The results showed that students showed higher enthusiasm and interest in learning. They seem to actively follow instructions, enjoy attractive visual displays, and more easily understand the gotong royong material presented. In addition, interaction and cooperation between students are also increased through group activities presented in the flipbook-based Pancasila Education e-module.

Teachers gave a positive response to this flipbook-based Pancasila Education e-module because it was considered helpful in delivering material more efficiently, interestingly, and easily understood. Character values such as cooperation, care, and responsibility contained in the gotong royong material are also easier to instill through this digital media-based approach. Overall, the final deployment process shows that the flipbook-based Pancasila Education e-module developed is feasible for use in learning and supports the implementation of the Independent Curriculum. This flipbook-based Pancasila Education e-module also has the potential to be implemented more widely in other schools that have similar student characteristics.

IV. CONCLUSIONS

Based on the results and discussion of this research, it can be concluded that the flipbook-based Pancasila Education e-module developed in this study is feasible, practical and effective to be used in learning Pancasila Education gotong royong material. First, in terms of feasibility, the results of the product material quality assessment in phase I received a percentage of 83% of feasible achievements, then corrected and re-evaluated and the results of the phase II assessment received a percentage of 88% of very feasible achievements. The results of validation are carried out by media design experts to assess the technical quality aspects of the developed product. The results of the product technical quality assessment in phase I received a percentage of 65% of the achievement adequate, then improved and re-evaluated and the results of the phase II assessment received a percentage of 93% of the achievement was very feasible. The results of validation are carried out by linguists to assess the language used in the product. The results of the language assessment in phase I received a percentage of 83% of feasible achievements, then corrected and reassessed and the results of the second phase assessment received a percentage of 96% of very feasible achievements. Second, practicality is tested on students and teachers to find out the level of practicality. The results of the test conducted on students with a percentage of 87% were very practical and the test on teachers was obtained with a percentage of 95% with very practical achievements. Third, effectiveness, students' learning outcomes in the affective, psychomotor and cognitive domains. Affective learning outcomes obtained a score of 80% with good achievements, psychomotor learning outcomes obtained a score of 89% with very good achievement and pretest cognitive learning outcomes that were completed were only 27% after using the products developed posttest cognitive learning results that were completed obtained 93% with an average N-Gain of 0.71 with a high category. The implications of this study show that the results obtained from this study show that there is an influence of flipbook-based Pancasila Education e-modules in improving the learning outcomes of grade IV students of SD Prista Kartini Medan Area. This explains that e-modules are one of the factors that are of concern to improve learning outcomes. The products developed have high feasibility, practicality and effectiveness. By using the influence of this flipbook-based Pancasila Education e-module, students better understand and explore the material clearly and more easily so that students can learn effectively and efficiently, thereby making cognitive, psychomotor and affective learning outcomes increase. The use of the influence of flipbook-based Pancasila Education e-modules provides opportunities for students to give opinions and develop their creativity in understanding gotong royong materials. If students have difficulty understanding the material presented, students can reopen the material presented through the influence of flipbook-based Pancasila Education e-modules so that anytime and anywhere to access it.

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