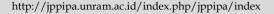


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Development of Canva-Based Interactive Learning Media for Elementary School IPAS Learning

Fithrotin Nisyaa^{1*}, Suratno¹, Susilo Tri Widodo¹

¹Department of Elementary School Teacher Education, Faculty of Education and Psychological Sciences, Universitas Negeri Semarang, Semarang, Indonesia.

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Corresponding Author: Fithrotin Nisyaa Fithrotinnisyaa24@students.unnes.ac.id

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Abstract: This study aims to enhance the learning environment in elementary school IPAS (Integrated Science and Social Studies) classes by developing Canva-based interactive learning media. The focus is on making learning more engaging and effective, addressing issues with traditional teaching methods that can leave students feeling bored. The research employs the Research and Development (R&D) approach using the ADDIE model, which includes five stages: Analysis, Design, Development, Implementation, and Evaluation. Data collection instruments consist of pretests, posttests, and questionnaires to gather feedback from students and teachers. Expert validation results indicate that the learning media is very feasible, with material experts rating it at 92% and media experts at 96%. N Gain tests show significant improvement in student learning outcomes. Feedback from students and teachers is also highly positive, with 97.77% from small-group students, 97.08% from large-group students, and 100% from teacher. Based on the values obtained, canvas-based interactive learning media in elementary school IPAS learning can be said to have been developed that is feasible and effective to improve the learning outcomes of Class V students at SD Negeri Nongkosawit 02.

Keywords: Canva; Interactive media; IPAS learning

Introduction

In the 21st century, education and technology have become important elements in education. To attract students' attention and interest, teachers can utilize digital media in science development (Jatmiko et al., 2024). Multimedia-based learning has become a common trend utilized by teachers today in the learning process (Fitria, 2022). Multimedia is considered to have many benefits such as fostering interest and motivation, increasing learning comprehension in students, improving critical thinking skills, and providing accurate and actual information (Ardivani et al., 2023). The use of information and communication technology and digital literacy has now become an innovation applied in the world of education (Aprilia et al., 2023; Nurhayati et al., 2023). With the rapid advancement of technology, educators are expected to continue to innovate and use learning media that can be adapted to current developments. one of the learning media that is trending in the new era of 21st century learning is digital-based learning media.

Educators and students in the 21st century must be able to communicate and adapt to the development of the times, in this case, the development of technology, in addition, along with the continued development of the times, it is directly proportional to the development of problems that require solutions with high-level thinking (Abidin et al., 2023). Teachers can use technology to prepare interactive learning media. Learning media is a tool to convey messages from source to receiver that can help the learning process. One form of learning media is Canva media (Novita, 2023).

Learning media is anything that can be used to present subject matter so that students feel more involved, interested, thinking, and happy with learning activities. In the learning process, there are several components that must be considered, one of which is learning media. Teachers use media as a tool to distribute learning materials to students in order to foster students' interest and attention so that learning is more effective (Mustikawati & Isdaryanti, 2024). In choosing the right learning media, educators use creativity and innovation by considering the needs, abilities, and characteristics of students and available resources If students can properly understand what they are learning, learning will be more meaningful (Nissa et al., 2021). Learning media can focus students' interests and create learning motivation that affects their learning activities and outcomes (Inayah et al., 2023). Based on digital-based learning and the development technology and information, foster the use of effective, efficient, and innovative learning media (Mulyanto & Mustadi, 2023). That way, there is a need for digitalbased learning media that can be used to maximize student learning outcomes.

Canva is a free application and web-based application that has a used for designing and facilitating the creation of learning media for teachers (Putra & Filianti, 2022). The advantage of using Canva is that it can widely express creativity and is very accessible in various circles (Ilyas et al., 2023). Canva application is a tool to support creativity in the classroom during learning. The only design platform that makes visual learning and communication easy and fun (Monoarfa & Haling, 2021). Canva has a large collection of templates, photos, videos, icons, fonts, music, and sound effects. Especially in today's era, many in various social media use AI, and the Canva application is also available (Kurniasih et al., 2023). The purpose of making the Canva application learning media is to create active learning, so it's not boring, or monotonous and of course create interesting learning so that you better understand the material presented (Hidayah et al., 2023). Canva not only has a free version but some various templates and features can be used to create beautiful and attractive designs (Ardivani et al., 2023).

Ummah & Mustika (2024) state that the use of interactive learning media with Canva can quickly make students interested in what they are learning. Using the Canva Application as media is very effective, practical, and varied. The use of Canva media as a learning medium for teachers in delivering material is very necessary as an effort to attract students' attention to understand and comprehend the material delivered by the teacher (Wardana et al., 2022). The application ensures teachers can use effective content quickly, easily,

and on target. This is certainly very supportive of current teachers when teaching and learning. Therefore, using interactive learning media can make learning more effective, efficient, and interesting, especially in IPAS learning.

Natural and Social Sciences (NSP) is a science that studies living and non-living things in the world and their bonds and social entities that interact with human life as individuals and the environment (Kemdikbud, 2022). In the IPAS subject, students are required to remember and explore the material. IPAS makes students grow their curiosity about phenomena that occur around them. This curiosity can trigger students to understand how the universe works and interacts with human life. The basic principles of scientific methodology in science and science learning will train a scientific attitude (high curiosity, critical, analytical thinking skills, and the ability to draw the correct conclusions), giving students wisdom (Mukaromah et al., 2024).

Mastery can also help students increase their creativity. Given the amount of material that is quite abundant and very broad, students feel bored to learn. Teachers usually use the lecture method to deliver the material and have not used media in certain lessons. Lack of student attention causes students to not concentrate during the learning process. This can make the explanation from the teacher not well understood.

Based on the results of observations and interviews with fifth-grade teachers, SD Negeri Nongkosawit 02 found several problems in the IPAS subject matter originating from teachers and students. The problems that occur in teachers include the application of the independent curriculum which the teacher feels are not suitable because of the characteristics of passive students, and the use of learning media that is less varied and optimal. The facilities and infrastructure available at school already support the use of interactive learning media such as LCD projectors but the facilities and infrastructure are not used effectively. In IPAS subjects, student learning media is only focused on science, while social science uses less media because the material is too external which results in students only being taught by the lecture method.

Because in the implementation of learning activities, teachers tend to still be guided by textbooks and LKS in the delivery of learning materials. Occasionally teachers use pictures and videos from YouTube as learning media, causing a lack of creativity and teacher skills in utilizing learning media to make students easily bored in the learning process and lack of understanding of the material concretely. The use of media in the learning process is important because it will be able to provoke student stimulus and train students to be more active

and independent in building their knowledge. This research is essential as it identifies and addresses several issues in the learning process of IPAS (Natural and Social Sciences) in fifth-grade elementary schools. In the context of the advancement of educational technology, the use of digital and interactive learning media has become a pressing need to increase student engagement, motivation, and comprehension.

Seeing the above problems, it is expected that learning media that is interesting, fun, interactive, and IT-based that is relevant to the process of development of the times is highly expected, to make students actively participate in the learning process. In the field of IPAS learning in schools still tends to focus on the use of textbooks, material that is too broad makes it difficult for teachers to explain as a whole, and the lack of use of digital media.

Learning media must be interactive and interesting by using various school facilities and infrastructure that follow the circumstances of students and the school environment. This can make learning easier to understand and less boring. Canva application is one of the interactive learning media that can be used as a means of delivering material in the lesson process that provides features and uses for education. Interactive learning media in the form of Canva is published via the web, so students do not need a lot of storage space. The use of IT-based interactive learning media is very content, **IPAS** for learning especially suitable biodiversity material.

Other research that supports the use of Canva as an interactive learning media in learning is research that has been conducted by Kurniasih et al. (2023) with the title "Development of Canva-Based Learning Media for 11 Grades of SMAN 3 Lamongan on Physics Material". The results of the study were researchers using the ADDIE development model (Analyze, Design, Development, Implementation, and Evaluation). Respondents for the individual, small group, and field trials were students of 11 grades at SMAN 3 Lamongan. The results of due diligence by material experts, learning design, and media were 83, 96, and 93%. The results of the analysis of peer, individual, small group, and field trials were 92, 93, 88, and 90%.

Based on the description above, the researcher focuses on R&D research. The objectives of this research are as follows: Produce development products in the form of Canva-based interactive learning media in science learning in grade V elementary school. Analyzing the validity of Canva-based interactive learning media products in science learning in grade V elementary school. Testing the feasibility of Canva-based interactive learning media in science learning in grade V elementary school. The novelty in this research

is to develop Canva as an interactive learning media for learning IPAS biodiversity material with additional AI as a student tool to make it easier to learn the material to be learned.

Method

The type of research for the development of canvasbased interactive learning media is Research and Development (R&D), which is a research method applied to create or develop specific products and evaluate the extent of the effectiveness or validity of these products (Sugiono, 2020). The development model used is the ADDIE type model (Analysis, Design, Implementation, Development, and Evaluation). (Rusmayana, 2021). Dick and Carry in 1996 developed the ADDIE Model for conceptualizing learning systems. The ADDIE model development steps are considered more reasonable and complete. This model can be used for various types of development products in learning activities such as learning strategies, media, teaching materials, etc. The stages of the ADDIE model are as follows.

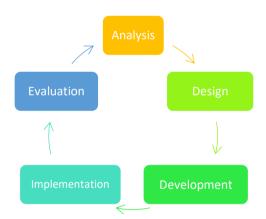


Figure 1. Stages of the ADDIE model

The analysis stage, it is done by analyzing the learning activities that are being carried out in the classroom, teaching materials, learning objectives, and media used by the teacher. The analysis is also carried out using a list of observations, interviews, and questionnaires of student and teacher needs. This stage also determines the topics to be taught in class, the learning objectives that must be achieved, the learning content that needs to be conveyed, and the suitability of the material with the target students. IPAS subjects were chosen, especially those related to biodiversity.

The design stage determines the type of learning media to be developed and determines the prototype design. Furthermore, the development of validation instruments. At this stage of development, it produces a designed product, namely an interactive learning media canvas with biodiversity material. At this stage, product validation is carried out which includes media and material validation. The selected media and material experts have qualifications and expertise. In addition to experts, students were asked to fill out a questionnaire to provide input on the media.

At this stage, the experts provided input and suggestions to improve the product. Then based on the experts' suggestions, revisions were made. After the media was validated, product trials were conducted on students from outside the experimental class. In the implementation stage, students were involved in finding out the students' responses to the interactive media canvas. A trial was conducted to determine the practicality of the product. This stage involved 6 students in the small group trial and 16 students in the large group trial. All trial students were fifth-grade students at SD Negeri Nongkosawit 02 Semarang City, Indonesia. At the evaluation stage, a response questionnaire was filled out to students who had used the media to determine the effectiveness of using the media that had been given.

The research was conducted using data collection methods in the form of tests and questionnaires. The first data collection instrument used a questionnaire when conducting validation conducted with material and media experts.

Result and Discussion

The product developed is an interactive learning media using Canva. The following stages are used in the development of this interactive learning media using the ADDIE-type model, including the following.

Analysis

At the Analysis stage, the results of the analysis at SD Negeri Nongkosawit 02, grade V students need digital-based learning media that can help with difficulties in understanding IPAS lessons on broad biodiversity material. In addition, students also need learning media so that the learning process can be effective and efficient so that the material taught can be delivered in a timely manner to students. In IPAS learning, class V cultural heritage material is still low, reinforced by data from daily exam results, there are still many students who score below KKM, especially on the topic of biodiversity. The curriculum used at SD Negeri Nongkosawit 02 in class V in learning IPAS is the independent curriculum. In the student analysis, it was found that learning was less fun because so far learning was only teacher-centered with a lecture learning model and textbooks that made students bored when learning IPAS lessons. Learning only focuses on the teacher and is not interactive. That way, canvas-based interactive learning media in IPAS learning is expected to provide enthusiasm and a pleasant atmosphere for students during the learning process.

Design

The Design stage, it includes making a concept map with a complete description of the content of biodiversity material on the distribution of flora and fauna in Indonesia by the learning outcomes of the independent curriculum. The material preparation process is also carried out by looking for references in various sources such as teacher books, the internet, and articles. In making interactive learning media using Canva, the first thing to do is to choose a template and choose a presentation (16:9) because the product to be developed is an interactive presentation. Then choose the template as desired in the template search. After that, we can see several features that will be used in designing media including elements, text, uploads, images, projects, applications, photos, audio, video, and backgrounds. The display in this Canva-based interactive media contains titles, menus, instructions, vocabulary, materials, videos, quizzes, and developer profiles.

Development

The development stage, it includes designing the design of each page on interactive learning media using Canva on each page. Below is a visual presentation of Canva-based interactive learning media. Figure 2 is the title page. From Figure 2 on the title page, there is a material title and a start button to start learning.



Figure 2. Title page



Figure 3. Main menu

Figure 3 is the main menu page. From Figure 3 the main menu has instructions, materials, videos, quizzes, vocabulary, and evaluation. The display on the main menu also has AI photos of researchers to explain in more detail.

Figure 4 is the display of instructions for using learning media. From Figure 4, some instructions interpret the function of the buttons used in Canva media. There is a home button on the top left side that functions to return to the main menu. The display on the instructions page also has an AI photo of the researcher to explain in more detail.



Figure 4. Instructions

Figure 5 is the material menu. From Figure 5 there is a choice of material to be studied containing flora and fauna. If we press the writing of one of the materials, it will go to the destination page. There is a home button on the upper left side that serves to return to the main menu. The display on the material there are also AI photos of researchers aimed at explaining in more detail.



Figure 5. Material

Figure 6 is a sub-material page on the learning media. From Figure 6 the sub-material page has Asiatic flora material. There is a button on the lower right side that serves to go to the next material. Meanwhile, there will be a home button on the upper left side that serves to return to the main menu. The display on the sub material there is also an AI photo of the researcher aims to explain in more detail.



Figure 6. Sub material

Figure 7 is a video display. From Figure 7 the video page is a YouTube channel. There is a home button on the top left side that serves to return to the main menu. The display on the videos there are also AI photos of researchers aiming to explain in more detail.



Figure 7. Video

Figure 8 is a quiz display. From Figure 8 the quiz page is combined with the QuizWhizzer application. Researchers compiled a game with 20 minutes with 10 simple questions about flora and fauna material in Indonesia.



Figure 8. Quiz display

Figure 9 is the evaluation display. From Figure 9 the evaluation page students can answer according to the correct answer. Correct or wrong will be seen when it has clicked the answer and then directed to the answer response page.



Figure 9. Evaluation question

Figure 10 is the answer response page. From Figure 10 the answer response page for students answering questions is given an interactive touch. If the answer is wrong, an animation will appear containing the phrase "wrong answer, please try again" after which there is a button that says "back" on click to be directed to the previous question and done until it is correct. If the answer is correct, an animation will appear containing the sentence "your answer is correct, go to the next question" after which there is a button "next to proceed to the next question.



Figure 10. Answer Response

Figure 11 is the vocabulary display. From Figure 11 there is a vocabulary page for students who are still confused and do not understand the word they feel they do not know the meaning of. There is a button on the upper left side that functions to return to the main menu.

The display on the vocabulary page also has AI photos of researchers to explain in more detail.



Figure 11. Vocabulary display

After the product has been finalized, it can be shared with a link that can be accessed on computers and smartphones. then it will be validated by experts.

Table 1. Validator trial results

Validators	Percentage (%)	Description
Media expert test	96	very feasible
Material expert test	92	very feasible

Seen from the table above, the results of the material expert validation obtained a score of 92% and the media expert obtained a score of 96%. That way the Canvabased interactive learning media is declared "very feasible".

At the end of the product development stage, the product was tested in a class outside the. After finishing using the media, students were asked to do 30 questions. The results of the trial showed that among the 30 questions, 25 of them were "valid". This shows that students' responses to Canva-based interactive learning media are positive.

Implementation

At the Implementation stage, Canva-based interactive learning media is applied in teaching and learning activities at SD Negeri Nongkosawit 02 class 5 consisting of 22 students. In learning the initial ability of students to learn the distribution of flora and fauna in Indonesia, researchers provide students with pretest questions. Then the interactive learning media is operated through each student's smartphone in the classroom with the teacher. Not only in class, students can re-explore the material at home because the media developed can be accessed anytime and anywhere so that time can be efficient.

Evaluation

At the evaluation stage to measure the effectiveness and find out student responses and after using Canvabased interactive learning media. the process of assessing students and teachers by giving several statements.

Table 2. Validator trial results

Class	Validation results (%)	Description
Class teacher	100	very feasible
Small group trial	97.77	very feasible
Large group trial	97.08	very feasible

Based on the table above, the student response questionnaire for small group student responses obtained a percentage of 97.77%, large group student responses obtained a percentage of 97.08%, and the teacher obtained a percentage of 100%. Based on the value obtained by the Canva-based interactive learning media in elementary school IPAS learning, it can be said that it is very feasible to be applied in learning.

In determining the quality of the effectiveness of Canva-based interactive learning media in IPAS learning, students work on pretest and posttest questions.

Table 3. N-Gain test results

Class	Student	Pretest	Posttest	N-Gain	Criteria
Small group	6	56.00	91.33	0.80	High
Large group	16	54.00	90.5	0.80	High

Based on the table above, it can be seen that the comparison of the average value of the posttest results is higher than the pretest average value. to know the effectiveness of Canva-based interactive learning media can be seen that the N-Gain value with an average of 0.80 which means it is included in the high category. This shows that Canva-based interactive learning media can be said to be effective and valid when carried out in learning.

The interactive learning media developed can support students' academic independence during inclass learning and facilitate student learning to study at home. Because students can access the media anytime, anywhere, without being limited by location and time constraints.

Conclusion

Canva-based interactive learning media in IPAS learning can be concluded that the use of Canva as a platform for making learning media is declared feasible. The material presented in this interactive learning media is packaged using interesting animations and is easy to understand and understand in understanding the material provided. The feasibility level of Canva-based

interactive learning media in learning IPAS grade 5 SD Negeri Nongkosawit 02 is declared feasible to use with the results of the average value obtained as follows: the results of validation by material experts get a score of 92% and media experts get a score of 96% which indicates that Canva-based interactive learning media is very feasible. N Gain test data shows an increase in student learning outcomes. Student and teacher response data on Canva-based interactive learning media used, among others: small group student responses obtained a percentage of 97.77%, large group student responses obtained a percentage of 97.08%, and teachers obtained a percentage of 100%. Based on the values obtained, canvas-based interactive learning media in elementary school IPAS learning can be said to have been developed that is feasible and effective to improve the learning outcomes of Class V students at SD Negeri Nongkosawit 02.

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Author Contributions

F.N. contributed to the introduction, analyzing data, and writing articles. S. and S.T.W. acted as a supervisor in research activities and writing articles.

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Conflicts of Interest

The authors declare no conflict of interest.

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