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Development of Canva-Based Interactive Digital Learning Media with Hyperlink Features for Ecosystem Learning in Elementary School

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Abstract

This study aimed to develop a digital interactive learning media based on Canva with hyperlink features for the science ecosystem topic in fifth-grade elementary school. The study employed a Research and Development approach using the 4D model, consisting of define, design, develop, and disseminate stages. The developed media integrated text, images, instructional videos linked to YouTube, and interactive assessments generated through Canva AI. Data were collected through expert validation sheets and practicality questionnaires administered to teachers and students. The results indicated that the developed learning media achieved a very good level of validity in terms of media design, content accuracy, and language use. Furthermore, the practicality test results showed very positive responses from both students and teachers, indicating that the media was easy to use, visually appealing, and engaging in the learning process. Based on these findings, the digital interactive learning media based on Canva hyperlink was concluded to be valid and practical for use as a supporting learning resource in elementary science learning on ecosystem topics.

Keywords: *Canva; Digital learning media; Ecosystem; Elementary school; Interactive learning*

1. Introduction

Learning media is one of the essential components in the learning process as it functions as an intermediary for delivering messages from teachers to students. Learning media plays an important role in clarifying the presentation of learning materials, increasing students' attention, and creating more meaningful learning experiences. Well-designed learning media can reduce verbalism and help students understand abstract concepts [1]. Learning media also serves to enhance learning motivation, improve learning effectiveness, and provide variation in the presentation of instructional content. The appropriate use of learning media allows students to actively engage in the learning process, so that learning is no longer teacher-centered but focuses on students' learning activities [2].

Science learning emphasizes direct and meaningful learning experiences to enable students to achieve a comprehensive understanding of concepts [3]. Therefore, the use of learning media in science learning functions to transform abstract concepts into more concrete and comprehensible forms. Learning media also supports the development of science process skills and increases students' active involvement in learning. The role of learning media in the context of science education becomes increasingly important, particularly in ecosystem topics. Ecosystem material requires an understanding of the relationships between living organisms and their environment, which is difficult to achieve if conveyed solely through verbal explanations. Thus, learning media that presents content in a visual and interactive manner is needed to help students understand concepts holistically [4].

The rapid development of digital technology has encouraged the use of more innovative digital-based learning media. Interactive digital media enables the integration of text, images, animations, and flexible navigation within a single learning interface [5]. One platform that can be utilized in the development of interactive digital learning media is Canva. This platform provides various user-friendly design features that enable teachers to develop engaging learning media aligned with the characteristics of elementary school students [6].

The use of Canva in learning can be further developed into interactive media through the utilization of hyperlink features that connect learning materials, exercises, and assessments. Digital interactive learning media based on Canva with hyperlink features is expected to enhance students' engagement in science learning, particularly on ecosystem topics. Based on this rationale, this study aims to develop a digital interactive learning media based on Canva hyperlink for science learning on ecosystem material in elementary school and to examine the feasibility of the developed media.

2. Research method

This study employed a Research and Development (R&D) approach, which is a research method used to produce a specific product and to examine its effectiveness [7]. The purpose of this study was to develop an interactive learning media based on Canva with hyperlink features for the ecosystem topic in fifth-grade elementary school. The development model used was the 4-D model, which consists of the define, design, develop, and disseminate stages. The define stage aimed to identify and analyze learning needs. Activities at this stage included front-end analysis, analysis of students' characteristics, task analysis, and analysis of learning objectives [8]. The results of this stage served as the basis for designing the interactive learning media based on Canva hyperlink.

The research subjects consisted of a fifth-grade teacher and students of SD Negeri 20 Pasar Tiku, Agam Regency, West Sumatra, with a total of 20 participants. Data collection techniques included validation sheets and practicality questionnaires. Validation sheets were used to obtain expert assessments of the developed media, while practicality questionnaires were used to determine students' and teachers' responses after using the learning media [7].

The design stage focused on planning the learning media. Activities included organizing the material framework, developing storyboards, selecting visual designs, and designing hyperlink components that connect text, images, videos, and icons within the media. This stage resulted in an initial prototype of the Canva-based learning media with hyperlink features. The develop stage involved the realization of the designed media. The developed media was validated by content experts, media experts, and practitioners to obtain feasibility assessments and improvement suggestions. Based on the validation results, revisions were made to improve the product according to expert recommendations and students' needs. In addition, a limited trial was conducted with a small group of students to examine the usability of the media. Subsequently, a large-group trial was conducted to assess its practicality. The disseminate stage aimed to distribute the developed learning media. Dissemination was carried out through a website containing a publicly accessible Canva link so that the media could be widely accessed by teachers and fifth-grade elementary school students.

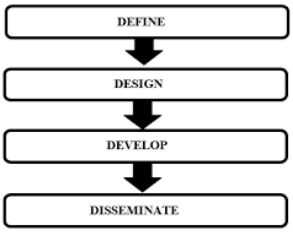

Fig. 1: 4D research model

The data analysis technique used was descriptive analysis by converting quantitative scores into qualitative categories. The data were obtained through assessment questionnaires using a five-point Likert scale to determine the validity and practicality levels of the developed learning media. The assessment instrument employed a five-point Likert scale with a score range of 1–5, where a score of 5 indicates a very good category, 4 indicates good, 3 indicates fair, 2 indicates poor, and 1 indicates very poor. The quantitative data were then converted into qualitative categories based on the criteria presented in Table 1.

Table 1: Scoring criteria for validity and practicality

Score Range (%)	Category
81-100	Very Good
61-80	Good
41-60	Fair
21-40	Poor
< 20	Very Poor

3. Result and Discussion

The product developed in this study is an interactive learning media based on Canva with hyperlink features for the ecosystem topic in fifth-grade elementary school. The learning media was designed by integrating various digital learning resources into a single interconnected interface. The learning content is not only presented in the form of text and images but is also complemented by instructional videos accessed through hyperlinks to the YouTube platform. The use of instructional videos aims to help students understand ecosystem concepts more concretely through the visualization of natural phenomena relevant to the learning material.

In addition, the learning media is equipped with interactive assessments developed using Canva AI features. These assessments are connected through hyperlinks, allowing students to directly complete exercises and evaluations after studying the material. The integration of instructional videos and AI-based assessments within a single learning media enables the creation of a continuous learning flow, starting from the delivery of learning material to the evaluation of students' understanding [6]. The design of the Canva-based learning media with hyperlink features is presented in Figure 1.

Fig. 2: The design of the Canva-based learning media

After the Canva-based learning media with hyperlink features was developed, the next step was the validation process conducted by media experts, content experts, and language experts. Media validation was carried out to assess the feasibility of the appearance and functionality of the interactive learning media developed using Canva with hyperlink features. The assessed aspects included visual design, text readability, layout consistency, ease of hyperlink navigation, and the integration of media components.

Content validation was conducted to evaluate the suitability of the learning content with the learning objectives of science (IPAS) ecosystem material for fifth-grade elementary school. The assessed aspects covered conceptual accuracy, content completeness, the logical sequence of presentation, and the appropriateness of the material to students' characteristics. Language validation aimed to assess the clarity and appropriateness of language use in the interactive learning media. The assessed aspects included sentence structure accuracy, text readability, term suitability, and the use of communicative language appropriate to the developmental level of fifth-grade students. The results of expert validation are presented in Table 2.

Table 2: Expert validation results

Validator	Percentage (%)	Category
Media validation	88	Very Good
Content validation	89	Very Good
Language validation	91	Very Good

The results of media validation indicate that the developed learning media falls into the very good category. The visual appearance was considered attractive and appropriate for the characteristics of fifth-grade elementary school students. This finding is in line with Pamela's view that fifth-grade students generally have a high level of curiosity, enjoy exploring, and are able to understand learning concepts based on real-life conditions [9]. Furthermore, students' cognitive development at this level has progressed toward understanding concepts through direct experiences in their surrounding environment. The hyperlink navigation also facilitates users in accessing learning materials, instructional videos, and interactive assessments. In addition, the consistent use of colors, icons, and layout enhances user comfort when utilizing the learning media.

The ecosystem material was organized in accordance with the learning objectives and presented systematically, enabling students to better understand the interrelationships among ecosystem concepts. The integration of instructional videos through hyperlinks was also considered effective in clarifying the material and strengthening students' understanding of ecosystem concepts. Regarding the language aspect, the selection of terms was adapted to the context of elementary science (IPAS) learning, thereby avoiding ambiguity in meaning. Therefore, the results of media, content, and language expert validation indicate that the interactive learning media based on Canva with hyperlink features is highly valid.

Following the validation stage, practicality testing was conducted involving practitioners, namely fifth-grade students and the classroom teacher. The trial was carried out in two stages: a small-group trial and a large-group trial. The small-group trial involved 10 students and aimed to obtain feedback and identify weaknesses in the Canva hyperlink media before its use in the large-group trial. The large-group trial was conducted after the learning media had been revised based on feedback and suggestions from practitioners. In the large-group trial, all fifth-grade students used the Canva hyperlink media for ecosystem learning. After implementation, both students and the teacher were asked to complete response questionnaires focusing on ease of use, visual appearance, and students' interest in using the Canva hyperlink media in ecosystem learning. The results of students' and teacher's response questionnaires are presented in Table 3.

Table 3: Results of students' and teacher's response questionnaires

Practitioner	Percentage (%)	Category
Large-group trial	97	Very Good
Classroom teacher	96	Very Good

The results of the large-group trial indicate that students' responses to the use of the interactive learning media based on Canva with hyperlink features fall into the very good category, with a percentage of 97%. These findings show that the developed learning media is easy to use, visually appealing, and capable of increasing students' interest in participating in science (IPAS) learning on ecosystem topics. The ease of navigation through hyperlink features facilitates students' independent access to learning materials, instructional videos, and assessments, thereby supporting active engagement in the learning process.

In addition to students' responses, the results of the classroom teacher's response questionnaire also fall into the very good category, with a percentage of 96%. The teacher assessed that the interactive learning media based on Canva with hyperlink features is practical for classroom use and assists in delivering ecosystem material in a more systematic and engaging manner. The developed media was also considered appropriate for the characteristics of elementary school students and suitable for use as a supporting learning medium in classroom instruction. Therefore, the practicality test results indicate that the interactive learning media based on Canva hyperlink can be effectively used in elementary school science learning.

4. Conclusion

This study resulted in the development of a digital interactive learning media based on Canva with hyperlink features for the ecosystem topic in fifth-grade elementary school. The novelty of the developed media lies in the integration of instructional videos linked through hyperlinks and interactive assessments generated using Canva AI within a single, accessible, and user-friendly learning media. This integration enables students to experience a continuous learning process, ranging from understanding the learning material to conducting independent evaluation.

The results indicated that the developed learning media achieved a very high level of validity, with media experts' validation reaching 88%, content experts' validation 89%, and language experts' validation 91%. In addition, the practicality test showed very positive

responses from students and teachers, with percentages of 97% and 96%, respectively, indicating that the media is easy to use, attractive, and appropriate for the characteristics of elementary school students. Therefore, the digital interactive learning media based on Canva hyperlink is considered valid and practical for use as a supporting learning resource in elementary school science learning on ecosystem topics.

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