

Development of Interactive PowerPoint Learning Media IPAS How I Live and Grow

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Abstract

Learning media is any learning resource in which there is media or tools used to make it easier for students to understand the material presented by the teacher or delivered during the teaching and learning process. The aim of this research is develop interactive PowerPoint learning media for the science subject "How We Live and Grow" for Class V at SDN Jakasampurna IV, West Bekasi. Using the R&D method based on adaptation of the Borg and Gall model, the research followed six steps: identifying potential and problems, data collection, product design, design validation, product revision, and product testing. Data were collected via research instruments and validation sheets. Results indicated that the interactive learning media is suitable for Class V, achieving high evaluation scores: 3.96% from media experts, 3.3% from subject matter experts, 3.7% from linguists, 3.7% from classroom teachers, and 3.88% from students. The research concludes that this interactive PowerPoint media is appropriate for teaching the subject "How We Live and Grow" in Class V at SDN Jakasampurna IV, West Bekasi.

Keywords: Interactive PowerPoint, Natural Science and Social Science subjects, Research and Development (R&D)

1 INTRODUCTION

Education is a crucial domain for a country, as its development depends on the effectiveness of its educational system (Munsir, 2019). According to Law No. 20 of 2003 on the National Education System (SISDIKNAS), "Education is a conscious and planned effort to create a learning atmosphere and process so that learners actively develop their potential to possess religious spiritual strength, self-control, personality, intelligence, noble character, and the skills necessary for themselves, society, the nation, and the state." The core of education involves the interaction between educators and learners, aiding students in achieving educational objectives. This educational interaction can take place in families, schools, and communities, supporting students in developing their educational experiences (Yudha & Rahmad, 2020).

In teaching at the Elementary School level, it is essential not only for teachers to be well-prepared but also to employ engaging methods to prevent students from becoming bored or sleepy (Akyn & Ok, 2021; Utami et.al., 2024). Young learners, at this age, may struggle to understand the material if teachers do not use interesting approaches or methods. Based on observations conducted by the researcher at SDN Jakasampurna IV in West Bekasi, issues were found with the teaching methods, which primarily relied on lectures, demonstrations, and question-and-answer sessions. However, there are many other methods that teachers could use to make the classroom more engaging. During the observations, the researcher also noted effective teaching and excellent material delivery by the teacher, despite a lack of technology use in the learning process. Therefore, the

researcher aims to focus on technology-related research, as technology has advanced significantly in recent times. With the progression of the era and the development of knowledge, it is essential for all age groups to be tech-savvy. For elementary school teachers, being proficient in information and communication technology (ICT) has become a necessity (Ulfa M, et al, 2023; Vioreza, 2023). One effective method for teaching in elementary schools is using learning media so that students can directly understand the material explained by the teacher.

Learning media refers to the tools, methods and techniques applied to increase the effectiveness of communication and interaction between teachers and students in educational and teaching activities at school (Widianto, 2021, Sukmawati, et al, 2023). Learning media is an effective tool that can be used by teachers to achieve the desired goals in the learning process (Setiawan, et al, 2021). Learning media is an inseparable element in the teaching and learning process (Nugraheny, 2018). Learning media is particularly important for all subjects, especially for IPAS, as its content is closely related to nature and society.

Hardiansyah, et al. (2024) IPAS stands for Natural Science and Social Science, where the majority of tasks in this subject are practical. The essence of teaching IPAS in schools is to prepare students to face changes in life through practice based on logical, rational, and critical thinking, enabling them to apply IPAS thinking patterns in everyday life. However, historically, IPAS has been viewed as a fun subject but often leads to boredom among students, as it is perceived as merely reading and writing material.

The learning process in IPAS has traditionally relied on lectures, where students only listen to what the teacher presents, resulting in them writing without truly understanding the content (Yang, et al, 2024). Therefore, teachers need to employ methods or approaches that engage students. One popular method among today's students is using technology-based learning media, as this is an ideal time to integrate technology into classroom instruction, especially in IPAS, which is directly related to students' daily lives.

One technology that educators can use in the learning process is audiovisual technology (Nicolau, et al, 2024). One example of this is Microsoft PowerPoint. Microsoft PowerPoint is a Microsoft application that serves as a good option for presenting learning media in a presentation format; its features are straightforward and easy for teachers to understand. Therefore, Microsoft PowerPoint is very suitable for use as a learning medium in both online and offline classes (Muhammad Hamidi, Ade Irma Sagala 2021; 155).

Microsoft PowerPoint assists in delivering presentations, providing slide features that can accommodate the key points to be presented to the audience. With its animation features, slides can be creatively modified. Each slide contains the material being discussed. To make the slides engaging, the objective of conveying a topic can be achieved effectively, ensuring that the audience understands the content (Osman, et al, 2021). The difference between this research and previous studies is that this research creates a game within an interactive medium, specifically interactive PowerPoint, and uses moving animations to engage students when learning IPAS, helping to prevent boredom.

2 RESEARCH METHODS

This research employs a qualitative-to-quantitative approach focused on the Development of Interactive PowerPoint Media for the IPAS subject in Class V at SDN Jakasampurna IV, West Bekasi. The development model of this study was adapted from the model that had been developed by Borg & Gall which consisted of ten stages namely: (1) research and information collecting; (2) planning; (3) preliminary product form developing; (4) preliminary field testing; (5) main product revising; (6) main field testing; (7) operational product revising; (8) operational field testing; (9) final product revising; and (10) disseminating and implementing (Nugraheny, 2017; Vioreza, et.al., 2023). The researcher has adapted into six research steps for the Natural Science and Social Science subjects. The steps can be seen in the following diagram 1.

The experimental design model used to test the designed product is a Pre-Experiment Design with a one-shot case study type. The design model employed in this research method is a Pre-Experiment Design with a one-shot case study type. This research design can be understood as involving a group that receives a treatment, which is then observed for processes and outcomes (where the treatment serves as the independent variable and the outcome serves as the dependent variable (Nur Hasanah et al, 2020; Atmazaki et.al., 2023;)

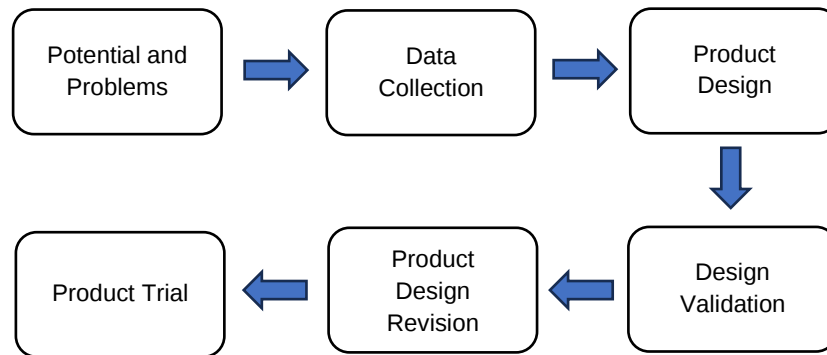


Diagram 1. steps of research and development

This research was conducted at SDN Jakasampurna IV in West Bekasi, located at Jl. Anggrek Raya, RT.009/RW.007, Jakasampurna, Kec. Bekasi Bar., Kota Bks, Jawa Barat 17145. The research took place in June during the second semester of the 2023/2024 academic year. The data collection techniques used in this study include observation, questionnaires, interviews, and documentation. The population for this research consists of fifth-grade students at SDN Jakasampurna IV. Sampling was conducted using Cluster Random Sampling, where the teacher randomly selected two classes, namely V A and V B. The selected class using this method was class V B, which has 30 students, comprising 17 boys and 13 girls, along with the IPAS teacher for the fifth grade at SDN Jakasampurna IV.

The quantitative data for this research was obtained from questionnaire results and will be analyzed using the Likert Scale formula. The Likert Scale is used to measure attitudes, opinions, and perceptions of an individual or a group regarding an event. The Likert Scale consists of five categories: very good, good, sufficient, poor, and very poor. The formula for percentage used in this product research, according to Sugiyono, is as follows:

$$X = \frac{\sum x}{n}$$

Description:

X = Average Score

Σ = Total Score

n = Number of Respondents

3 RESULT AND DISCUSSION

From the research conducted, the results regarding the development of interactive PowerPoint media for the Natural Science and Social Science subjects among fifth-grade students in Class V A during the second semester of the 2023/2024 academic year at SDN Jakasampurna IV, West Bekasi.

The product developed in this research is interactive Powerpoint media which is suitable for use in learning. Based on the results of the analysis of potential and existing problems, it was obtained: (1) the results of interviews addressed by class V teachers, where the essence of the results was to say that students when learning, especially in subjects that include many theories such as science and science, class V students very lack of focus and some of them were chatting with each other or busy themselves. So that when the teacher has finished delivering the learning material and working on assignments or questions, the results of the second interview addressed by class V students stated that the media used by the teacher when carrying out learning were only student packets and sometimes Powerpoint but that was still normal (2) Review results document, where the researcher during observations saw that during social science learning, several students did not understand and answered the questions incorrectly. easily get bored. So to overcome this problem we need interactive learning media, so when using this media not only the teacher is active but students can also actively participate with the teacher in running the media.

The media developed and will be used by teachers is interactive Powerpoint media. Therefore, when developing this media, planning and design is needed regarding the creation of this interactive Powerpoint media. Planning and design for developing this media includes determining KI, KD and indicators. This media development is not only used for science subjects but can be used in other subjects.

To know whether the product design being developed is suitable or not suitable for elementary school (SD) students, an assessment from experts is needed. Starting from media experts, materials and language experts. If it has been validated by the three experts, the product can be immediately tested on class V students. When they have finished learning using this media, students are asked to fill out a student assessment instrument sheet in the form of a questionnaire regarding this interactive Powerpoint learning media. This student questionnaire is intended for researchers to know whether this product is suitable for science and science learning in class V elementary school. The assessment instrument given to experts uses a Likert scale or four scale questionnaires. Based on questionnaire assessments from experts, students and class teachers, the overall questionnaire results obtained can be seen in the table 1

Table 1. Overall Analysis Results

No.	Criteria	Overall Product Data Analysis Results			
		Summary	Average	Presentation	Criteria
1.	media expert validation	79	3,95	3,95 %	Eligible
2.	Subject Matter Expert validation	33	3,3	3,3 %	Eligible
3.	linguist validation	37	3,7	3,7 %	Eligible
4.	fifth grade teacher	37	3,7	3,7 %	Eligible
5.	students	388	77,6	3,88 %	Eligible

Based on table 1, the results of the media expert validation assessment data analysis were obtained with a total score of 79 out of the 20 question indicators given. Then the total score is calculated, the average score is 3.95 and the percentage result is 3.95%. The percentage results can be converted into a table of eligibility criteria so that the results obtained are in the Eligible category.

Based on table 1, the results of the subject matter expert validation assessment data analysis were obtained with a total score of 33 out of the 10 question indicators given. Then the total score is calculated, the average score is 3.3 and the percentage result is 3.3%. The percentage results can be converted into a table of eligibility criteria so that the results obtained are in the Eligible category.

Based on table 1, it can be seen that the results of the analysis of the linguist validation assessment data were obtained with a total score of 37 out of the 10 question indicators given. Then the total score is calculated, the average score is 3.7 and the percentage result is 3.7%. The percentage results can be converted into a table of eligibility criteria so that the results obtained are in the Eligible category.

Based on table 1, it can be seen that the results of the analysis of the fifth-grade teacher questionnaire assessment data were obtained with a total score of 37 out of the 10 question indicators given. Then the total score is calculated, the average score is 3.7 and the percentage result is 3.7%. The percentage results can be converted into a table of eligibility criteria so that the results obtained are in the Eligible category.

Based on table 1, it can be seen that the results of the questionnaire assessment data analysis of students were obtained with a total score of 388 from the 20 question indicators given. So the number of students is multiplied by the number of indicators so there are 100. Then the total score is calculated, the average score is 77.6 and the percentage result is 3.88%. The percentage results can be converted into a table of eligibility criteria so that the results obtained are in the Eligible category.

Based on the table 1 and explanation of the analysis above, the overall results of the assessment of interactive PowerPoint learning media are in the Decent category. Thus, overall, both media experts, material experts, language experts, students and class teachers stated that the development of interactive PowerPoint media in the science and science subject for class V students at SDN Jakasampurna IV was declared suitable for use.

4 CONCLUSION

This development research on learning media has resulted in an interactive PowerPoint for teaching IPAS on the topic "How I Live and Grow." The development of this learning media has been validated by subject matter experts, language experts, and media experts. From the evaluations of the three validators, along with teacher responses and student feedback, it has been deemed suitable and valid. This makes it easier for students to understand the lessons, particularly in Natural Science and Social Studies (IPAS), and facilitates teachers in delivering the content. Therefore, the interactive PowerPoint media for the IPAS topic "How I Live and Grow" at SDN Jakasampurna IV Bekasi Barat can be used in teaching and learning activities.

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