

## Managing students' learning interest in civics learning through a genially-based interactive multimedia

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### ABSTRACT

This study aims to create a Genially based interactive multimedia product to increase interest in learning civics among fifth-grade students. This research and development type uses the analyze, design, develop, implement, and evaluate (ADDIE) model. This study used three samples in the one-to-one stage, six in the small group stage, and 26 in the field test stage. This media produces media quality with a total score percentage of 88%, categorized as very feasible through media expert validation. This product also makes material quality with a total score percentage of 94%, classified as very feasible through content expert validation. The product effectiveness test through the N-Gain test obtained a total score percentage of 1%, which was included in the high category. This study concludes that Genially-based interactive multimedia effectively increases students' interest in civics.

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## 1. INTRODUCTION

Education is essential to human life since humans are still at their primary age. In the world of education, students are expected to be able to achieve the learning they take. Research examining teachers' teaching strategies in civics learning reveals that teachers still teach with an ancient technique, namely teacher-centered red knowledge [1]. Further research also shows that students who use conventional methods in learning citizenship have lower learning outcomes than students who learn civics with non-conventional methods [2].

Several studies have proven that technology is effective in helping students understand learning better [3]–[6]. One of the innovations in the field of education from the rapid development of this technology is interactive multimedia. Media made by the teacher in the form of media can provide an excellent stimulus to increase student learning interest [7]. Interactive multimedia offers various video, text, images, and sound elements into one learning medium [8]. A study developed an application based on interactive multimedia and a map model [9]. The application was created to analyze data on stunting cases in Indonesia. Other studies have developed interactive multimedia using online video games [10]. Other studies have also developed an interactive multimedia product through list, identify, note, create, and self-test (LINCS) for learning English pronunciation [8]. Another study developed interactive multimedia software "inquiry playroom" [11]. The research was aimed at high school-level students in science learning. Other research develops computer-based technology through interactive multimedia [12].

Based on some of the research above, various kinds of interactive multimedia are used for multiple purposes but are primarily directed at the high school level. This research will focus on Genially-based interactive multimedia to increase elementary school students' interest in learning civics. Genially, features are more varied and easier to use because they are easy to understand and recognize. The final product created on Genially can be a link, which can later be distributed to students.

Based on the statement above, interactive multimedia is indeed suitable for use by teachers and students in learning at school. However, interactive multimedia still needs to be used to increase interest in civic learning among elementary school students. Many studies rarely discuss learning media carried out in civic education learning. A study examines how interest in learning can be improved using augmented reality (AR) technology with learning materials about railroad technology [13]. Other research conceptualizes digital games to stimulate interest in science, technology, engineering and math (STEM) [14]. One study examined interest in learning the Chinese language by testing the effectiveness of the key-image method (KIM) [15]. In addition, the research analyzes the impact of the problem-based learning (PBL) model on female students' interest and understanding of computer science [16]. Another study tested the evaluation of the effect of incomplete material explanations on the interest and learning behavior of elementary students in science learning [17]. Next, research analyses and tests found that the impact of education level, years of service, work motivation, and work discipline on interest in learning can improve learning outcomes for high school students with package C [18]. Other research examines determining demographic differences in secondary students' interest in the technical and vocational education and training (TVET) program [19].

Further research has explored the factors and causes of fatigue and interest in learning regarding learning approaches, academic results, and gender in students [20]. Other research also examines how the influence of adaptation affects the outcomes of interest in game-based learning in mathematics learning [21]. Although the study discusses multimedia on learning interest, this research examines the aesthetic effect of a multimedia learning application on secondary students with science learning [22].

Therefore, based on the novelty of the research, which shows that it still needs to be done, it is essential to do this research by combining Genially-based interactive multimedia and learning interest in civics learning for fifth-grade elementary school students. This study poses the following main questions: "Does the use of Genially-based interactive multimedia affect increasing interest in learning civics in fifth-grade elementary school students?". The formulation of the problem in this study is as follows:

- What is the procedure for developing Genially-based interactive multimedia to increase learning interest in civics learning in fifth-grade elementary school students?
- How is the feasibility of using Genially based interactive multimedia to increase interest in civics learning for fifth-grade elementary school students being developed?
- How is the effectiveness of Genially-based interactive multimedia to increase learning interest in civics learning for fifth-grade elementary school students being developed?

Technology for civics learning: The emergence and development of technology allow teachers to enrich themselves with sufficient technological knowledge and information and communication technology (ICT) skills to adapt to new technological developments and develop their teaching methods [23]. A study shows that technology can help the development of students' higher-order skills [24]. Other studies show that media literacy impacts students' ability to create and share political content, associated with greater student involvement in online participation [25]. The findings from these studies support the concept of Civic Education, which upholds the values of democracy, justice, and equality [26], especially in today's era through digital assistance that can develop citizenship skills [27]. The schools have great potential to help students develop an interest in democratic processes in civics learning [28]. Therefore, to be able to make changes in the future for the new generation, teachers need to use new approaches using technology [29].

Interactive multimedia in increasing learning interest: One of the inventions from technological developments is interactive multimedia. Interactive multimedia has created opportunities for teachers to assist student learning [30]. Interactive multimedia that appears as a form of digital learning presents various representations, such as animation, video, audio, text, and images [31]. According to one study, students cannot be directly given learning information, but they need to receive data that allows them to combine words and pictures into meaningful learning for long-term storage in their memory [32]. Multimedia that contains verbal and visual communication must interact and cannot be separated because the process of entering multimedia into memory is complex [32].

## 2. METHOD

This research used research and development (RnD). This study aims to make a product in interactive multimedia and test its effectiveness. This study used the analyze, design, develop, implement, and evaluate (ADDIE) model seen in Figure 1, which has five stages: i) analysis, ii) design, iii) development,

iv) implementation, and v) evaluation [33]–[35]. The target of this product is fifth-grade students. The research location was at Kebon Bawang 07 Elementary School in North Jakarta.

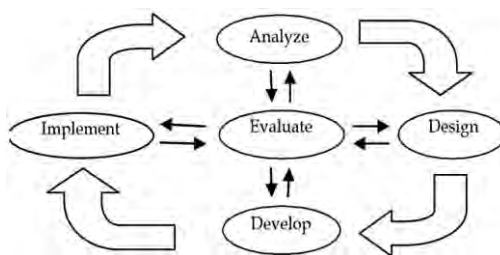


Figure 1. ADDIE model

Data collection techniques used questionnaire instruments, observation, and unstructured interviews. Needs analysis started with observing the learning process at school and ended with unstructured interviews with students and teachers. After that, the product could begin to be designed based on the findings of problems and needs in the field. After planning, the product can be developed. Material and media experts can test the developed product for feasibility using indicators determined using a questionnaire instrument. The questionnaire instrument was also used to see student responses to Genetically based interactive multimedia.

The data analysis technique used one group pretest-posttest design to determine the improvement of students' learning interest by applying Genially-based interactive multimedia. The first stage starts with a one-to-one test of 3 fifth-grade students and small groups of 6 fifth-grade students to see student responses to interactive multimedia with a questionnaire. After that, there is a field test stage to see student responses and test the product's effectiveness, which is carried out using a questionnaire instrument. The effectiveness test was conducted twice using a pretest and post-test on 26 fifth-grade students.

### 3. RESULTS AND DISCUSSION

#### 3.1. Results

This research started with a needs analysis conducted at Kebon Bawang 07 Elementary School for fifth-grade students. This activity was carried out by observing students who were carried out when the civics learning process occurred. In addition, structured interviews were conducted with teachers and unstructured interviews with students. Only a few students participated in discussion activities with the teacher. Therefore, this research develops products in the form of interactive multimedia that each student can use. In addition, this media can interact with users, which adds a new, fun experience for students.

The next step is to design the product to be developed. The product is produced based on the need analysis done previously so that the product design can adapt to the characteristics of fifth-grade elementary school students. Meanwhile, another strategy is preparing material by adjusting the essential competencies to make the indicators and learning objectives relevant to the product. Apart from that, the preparation of the material is also adapted to the typography and the language of the product, which is suitable for the fifth grade of elementary school. Genially will assist in the creation of this interactive multimedia product. Genially provides various access to include elements, such as images, text, video, and audio, that can help develop more creative and innovative products.

Then, products can be made based on previous designs, such as preparing materials to collect elements for this product. This interactive multimedia developed with Genially helps produce a product through a link. This link can be accessed via a web browser that can be used with various technological devices, such as smartphones or computers. This interactive multimedia product will display a front page with an interactive 'start' button when the link is opened. After pressing the button, the user is shown a tutorial on using the media. Next, there is a menu display consisting of five. First, the 'subject matter' menu contains learning materials prepared with interactive multimedia elements. Second, the 'quiz game' menu is based on the 'learning materials' menu. Third, the 'material information' menu contains information about learning in the media. Fourth, the 'tutorial using media' menu. Fifth, the 'image source' menu contains credits from images taken to become product elements.

After product development, the next step is to validate this interactive multimedia product, which experts carry out. The validation results from experts show that the percentage of total eligibility and criteria reaches 88%, which can be categorized as feasible. Product validation results from learning material experts

present the final acquisition percentage of 94%, classified as possible. These results indicate that the product is suitable for use and can be tested on students. After the product has passed the validation test by an expert from both a media expert and a material expert, the product enters the stage where it is tested in the field, namely elementary schools with fifth-grade students as the target subjects of this product. This test aims to identify student responses to the creation and measure the feasibility of the product.

Based on student response questionnaires to Genially-based interactive multimedia products, there are three aspects: the quality of the content and objectives, technical, and learning and instruction based on the product being developed. The media was tested first in the one-to-one stage, which consisted of 3 students with low, medium, and high learning ability. Then, the media test was carried out in the small group stage consisting of 6 people who were randomly selected. Only after that was the media tested again in the field test stage, which had a more significant number of subjects with 26 students.

Based on the one-to-one field test stage, the average score obtained is 81%, which is included in the feasible criteria. These results indicate that students are interested in learning about socio-cultural diversity and society with Genially-based interactive multimedia developed. Then, entering the small group trial, the average score at this stage produces a score of 88% with very feasible criteria. This proves students are interested in learning civics using interactive multimedia based on Genially. The final stage is a field test that tests the media in a broader subject. The average score obtained is 94%, which is included in the feasible criteria. At this stage, the average score and criteria prove that Genially-based interactive multimedia gets a good response from students because of their interest in learning civics with the product. The results of the pretest and post-test can be seen in Table 1.

Table 1. Gain pretest and post-test results using the N-Gain test

No	S pretest	S post-test	N-gain score	% N gain score	Criteria
1	38	77	0.62	62	Medium
2	42	87	0.77	77	High
3	38	97	0.95	95	High
4	37	90	0.84	84	High
5	30	88	0.83	83	High
6	25	97	0.96	96	High
7	25	97	0.96	96	High
8	50	100	1.00	100	High
9	75	85	0.40	40	Medium
10	35	100	1.00	100	High
11	42	85	0.74	74	High
12	45	88	0.79	79	High
13	33	92	0.88	88	High
14	38	90	0.84	84	High
15	43	90	0.82	82	High
16	25	100	1.00	100	High
17	48	83	0.68	68	Medium
18	38	90	0.84	84	High
19	32	90	0.85	85	High
20	32	100	1.00	100	High
21	25	100	1.00	100	High
22	40	87	0.78	78	High
23	32	93	0.90	90	High
24	30	92	0.88	88	High
25	33	92	0.88	88	High
26	42	97	0.94	94	High
Average	37	92	1	85	High

Based on the calculations in Table 1, the acquisition of pretest and post-test scores looks quite significant, with an average pretest score of 37 and an average post-test score of 92. After that, data was tested using the N-Gain test formula, which obtained an average N-Gain score of 85 or an average percentage score of 1%. This means that the N-Gain in this product is greater than the N-Gain interval specified in Table 1. The score 1 is more significant than 0.7 and included in the high criteria.

### 3.2. Discussion

Based on the findings of data taken from media experts, material experts, student responses, and effectiveness tests, Genially-based interactive multimedia products increase learning interest in the high category after giving the product to fifth-grade students. The student response data suggests that Genially-based interactive multimedia can make civics learning fun. This product also significantly affects pretest scores and post-test values; the changes are apparent. Genially brings many benefits to teachers and students today, where technological developments are very rapid. This idea is supported by research as stated in [36] that

Genially is a platform that makes attractive products interactive. In addition, using ICT that can access Genially can also encourage student's enthusiasm for learning [37].

Genially, an interactive multimedia service provider can increase student enthusiasm for learning because many media elements are combined into one product, so students feel energized learning civics. The existence of this interactive multimedia can affect student achievement because it relates to increased student enthusiasm due to fun learning [38], [39]. With this interactive multimedia, civics learning becomes practical and one of the advantages for students because this media can be studied anywhere and anytime, both at school and home, so independent learning is possible [40].

The selection of learning media that must be appropriate and following the times is critical to be determined by the teacher because students' feelings of pleasure and attention to a lesson are very influential for the sustainability of student learning. Therefore, this interactive multimedia is one of the things that can help teachers and students in the learning process that is integrated with technology [41]. Interactive multimedia can highly support the teaching-learning process since its characteristics conclude with a realistic and practical nature so that the students can be more interested in learning [42]. Interactive multimedia applied in the teaching-learning process can enhance teaching delivery effectiveness and stimulate the students' learning interest [43].

#### 4. CONCLUSION

Genially-based interactive multimedia is feasible as a learning medium in civics learning. In addition, this product has a positive effect on increasing the learning interest of fifth-grade students at Kebon Bawang 07 Elementary School in learning civics. This product was developed based on an analysis of needs and problems found in the field. With the results of the data obtained, researchers recommend interactive multimedia for teachers and students so that it can be used in other learning because it is easy to make, very helpful in increasing student interest in education, and practical to carry and use.

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