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Validity Feasibility of Interactive Media Based on Wordwall Game in Learning Pancasila Education Class IV Elementary School

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A B S T R A C T

This study is motivated by the suboptimal utilization of technology-based learning media in elementary schools. Classroom learning still largely relies on traditional media such as textbooks, blackboards, and illustrations. The purpose of this research is to develop an interactive, game-based learning medium using Wordwall for Pancasila Education among fourth-grade students at SDN Daerah I Pauh, Padang City. The research applies a Research and Development (R&D) method with the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). Data were collected through questionnaires that had been validated by subject matter experts, media experts, and language experts. The validity assessment results are as follows: the content expert gave a score of 83.3%, categorized as "valid"; the media expert gave a score of 95%, categorized as "very valid"; and the language expert gave a score of 81.25%, also categorized as "valid." The overall validity score, based on the average percentage, was 86.56%, which falls into the "very valid" category. These findings indicate that the Wordwall-based interactive game medium is highly valid for supporting Pancasila Education learning in elementary schools.

1. Introduction

The advancement of digital technology has become an inseparable part of various aspects of human life, growing exponentially since the arrival of the digital era. The use of digital technology has now spread to almost all sectors of society, regardless of age (Hadi et al., 2024). The field of education has also felt the impact of technological progress. According to Sadikin and Hakim (2019) as ciited in Zannah et al. (2024), advanced technology can make it easier for students to access more. The use of the internet, digital devices, and technology-based learning applications has become an essential element in supporting a more effective and enjoyable educational process. Through internet access and various digital applications, teachers and students can now access learning materials more easily, quickly, and engagingly (Anesya & Mansurdin, 2023).

This transformation in the world of education aligns with the changes and developments in Indonesia's curriculum, namely the Independent Curriculum (Andani et al., 2025). The Independent Curriculum emphasizes autonomy and innovative thinking (Dewi et al., 2024). Merdeka Curriculum incorporates national values and character education as integral components of its educational goals, particularly through the subject of Pancasila Education (Noor et al., 2025).

The subject of Pancasila Education is one of the changes introduced in the Independent Curriculum. Pancasila Education plays a vital role in delivering and instilling Pancasila values in all students and citizens. The content is designed to systematically guide students so that Pancasila values are not only understood but also practiced as a way of life in daily activities, thus contributing to the realization of the Golden Indonesia vision (Salsabillah et al., 2023). According to Kurniawaty (2022), as cited in Mudaim et al. (2025), Pancasila Education serves as a systematic effort to shape students' attitudes and behaviors based on Pancasila values, so they are not merely understood theoretically but also applied in everyday life. Pancasila Education is taught in a relevant manner to reinforce the Pancasila Student Profile. To achieve this goal, teachers are given the freedom to select and develop learning media that align with students' needs and contemporary developments (Adinda Viola et al., 2024).

The selection of learning media must be adjusted to the characteristics of the material being delivered, the competencies possessed by the teacher, and the availability of facilities and infrastructure to ensure the learning process is optimal and efficient (Azizah & Mansurdin, 2025). Learning media are tools designed to strengthen the teaching and learning process (Syadida, 2022). The appropriate use of learning media has been proven to enhance the quality of the learning process while also increasing students' interest in learning (Oviliani & Susanto, 2023). In this context, interactive learning media play a crucial role.

According to Munawir et al. (2024), interactive media are intermediary tools for delivering learning content to students that are computer-based. These media go beyond simply displaying videos or sounds—they may also take the form of animations, simulations, and educational games that keep students engaged during lessons. The use of interactive learning media has been shown to boost students' motivation, which positively impacts academic achievement and overall learning quality (Hadi et al., 2024). This approach incorporates interactive, visual, and multimedia learning elements that allow students to participate actively in the learning process (Weninggalih, 2023).

The use of technology-based learning media alone is not sufficient; the application of appropriate learning models is necessary to ensure that technology integration has a significant impact on learning outcomes (Desyandri et al., 2021). Learning models that encourage student engagement and foster changes in attitudes and mindsets are essential prerequisites in implementing the Independent Curriculum based on the Pancasila Student Profile. According to Wahyuni et al. (2021), problem-based learning is a student-centered approach in which learning occurs

through problem-solving activities that promote students' independent engagement in addressing challenges.

Based on observational and interview data collected by the author in Grade IV classes at SDN 20 Binuang Kampung Dalam, SDN 10 Lambung Bukit (Class IV A), and SDN 13 Kapalo Koto (Class IV A), it was found that classroom learning still heavily relies on traditional media such as textbooks, blackboards, and illustrations. On the other hand, the use of interactive digital media—such as PowerPoint presentations, educational videos, and game-based paper cards—has begun to be implemented in delivering lessons on rights and responsibilities. Although the delivery of material has generally been effective, there are indications that some students experience reduced focus, interest, and engagement in the learning process. This suggests that the use of digital learning media has yet to reach its full potential in terms of effectiveness.

Based on the data collected in Grade IV classes at SDN 20 Binuang Kampung Dalam, SDN 10 Lambung Bukit (Class IV A), and SDN 13 Kapalo Koto (Class IV A), The purpose of this research is to develop an interactive, game-based learning medium using Wordwall for Pancasila Education for fourth-grade students at SDN Daerah I Pauh in Padang City. Septyadi (2021:45) explains that Wordwall is an interactive learning tool that can be created online using a variety of readily available templates that are easy to use and capable of containing student assignments Wordwall is an interactive medium used during the learning process to increase student participation and facilitate student understanding, particularly in the context of Pancasila Education (Fickry & Gunawan, 2024).

2. Methodology

This Research and Development (R&D), as defined by Sugiyono in Reinita and Sespen (2025) is a research approach used to produce a specific product and systematically evaluate its effectiveness in real-world application. R&D is a scientific method applied to conduct analysis, design, development, and validation testing of the developed product (Rustamana Agus et al., 2024). This study adopts a development approach based on the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009, as cited in Fathoni et al., 2023).

The data collection method in this study utilizes questionnaires to validate content, language, and media in order to measure the validity of the instructional media being developed. According to Sugiyono (2008:199), as cited in Ernawati (2017) a questionnaire is a data collection technique conducted by providing a set of written questions or statements to respondents for them to answer. The scoring of the validity of instructional media is presented in Table 1.

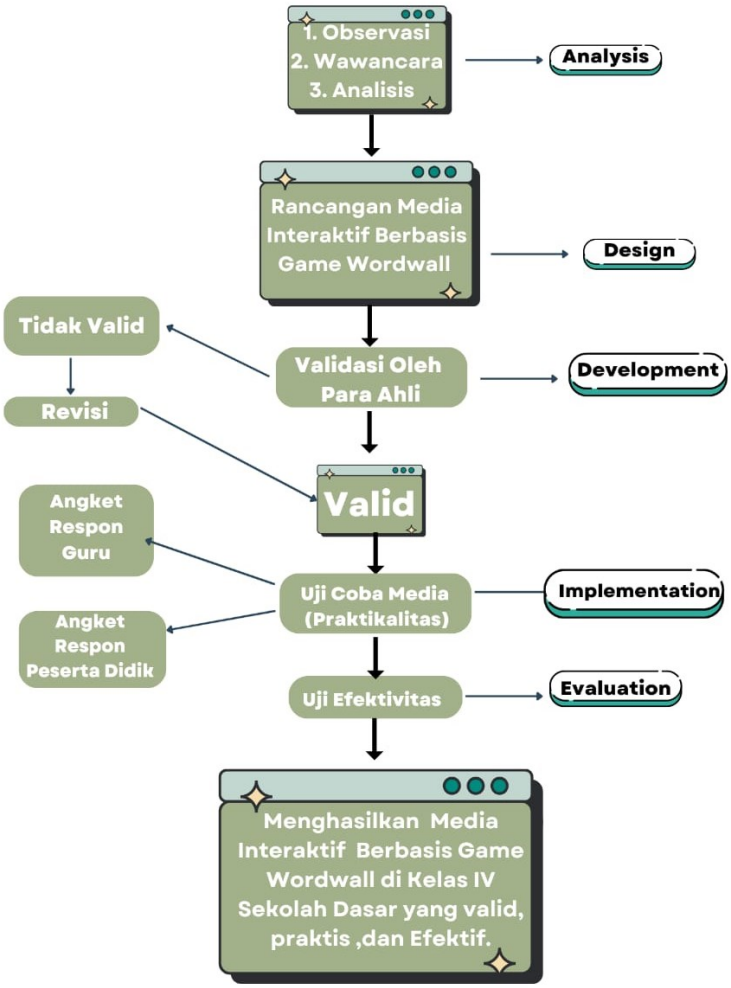

Figure 1. Flowchart of the ADDIE Development Model

Table 1. Scoring of Instructional Media Validity

Score	Category
4	Excellent
3	Good
2	Fair
1	Poor

Source:(Hendriani & Gusteti, 2021)(Hendriani & Gusteti, 2021)

Explanation:

- NP: Percentage value being calculated or expected
- R: Score obtained
- SM: Maximum score

To assess the validity and feasibility of instructional media using Wordwall, the following criteria are outlined in table 2.

Table 2. Categories of Instructional Media Validity

Score Percentage (NP)	Validity Category
86% - 100%	Very Valid
76% - 85%	Valid
60% - 75 %	Moderately Valid
55% - 59%	Less Valid
0 -54%	Not Valid

Source: (Hendriani & Gusteti, 2021)

To further evaluate the accuracy of the formula used, Riduwan & Sunarto, (2017) propose the following calculation to determine the final validity score:

$$(x) = \frac{\Sigma xi}{n} \text{ x } 100\%$$

Explanation:

- Σxi = Total score from each validator
- n = Number of validators

($\bar{x}$) = Mean (average) score

3. Results and Discussion

Results

This study produced an interactive learning media based on the Wordwall game platform, applying a Problem-Based Learning (PBL) model in the context of Pancasila Education for Grade IV elementary students. The media was designed using the ADDIE development model.

Analysis Phase

The analysis phase consists of needs analysis, curriculum analysis, and material analysis.

a. Needs Analysis

The needs analysis conducted by the researcher involved observations and interviews in Region I of Pauh, Padang City, which includes three elementary schools: SDN 20 Binuang Kampung Dalam, SDN 13 Kapalo Koto, and SDN 10 Lambung Bukit. The data collected revealed the following needs for interactive learning media : 1) Students require engaging and enjoyable interactive media to prevent boredom during learning activities. 2) Students need learning media that can boost their motivation. 3) Students had never used interactive media such as Wordwall prior to this study.Based on the results of the needs analysis, the researcher considers it necessary to develop an interactive learning media using the

Wordwall game platform that can motivate and energize students in the learning process, thereby increasing their interest in classroom learning activities.

b. Curriculum Analysis

This stage involves examining the curriculum currently used and implemented at SDN 20 Binuang Kampung Dalam, SDN 13 Kapalo Koto, and SDN 10 Lambung Bukit, namely the *Merdeka Curriculum*. The curriculum analysis refers to the learning achievements and instructional objectives related to the topic to be developed.

c. Material Analysis

The material analysis conducted by the researcher focused on Unit 2 of the Pancasila Education subject, titled *Constitution and Norms in Society*. The specific topic—*Rights and Obligations as Students and Family Members*—for Grade IV was found to be appropriate for integration into the developed instructional media.

Design Phase

In this phase, the researcher designed an interactive learning media using the Wordwall game platform for Pancasila Education lessons. The instructional media was created to leverage rapid technological advancements and to enhance students' motivation and enthusiasm during the learning process. The Wordwall-based interactive media was developed through the web application at https://wordwall.net/resource/90472917.

1. Click the "Log in to Wordwall" link to access the platform with a registered account, or sign in using a Google account via https://wordwall.net
2. Users will be directed to the main menu; then click on "Create Activity". The main menu interface of wordwall is shown in figure 2.

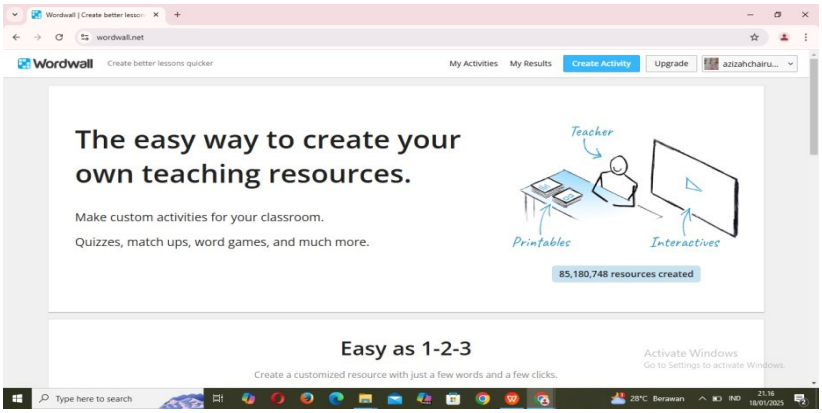

Figure 2. Wordwall Main Menu Interface

The template display of the instructional media is shown in Figure 3.

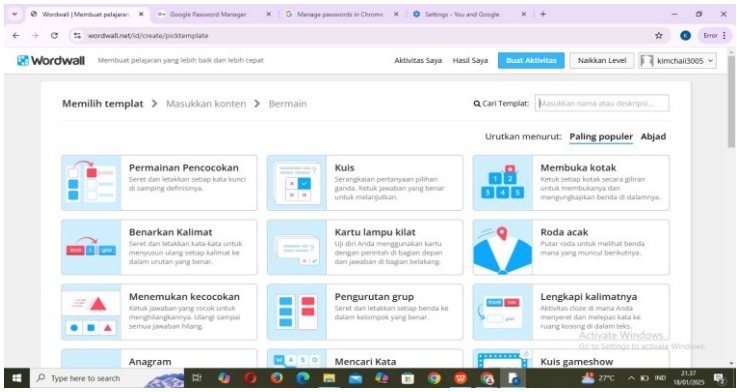

Figure 3. Template Interface Display

3. Click on the template feature to be used; here, the researcher utilizes the 'True or False' feature. The template display of the instructional media is shown in Figure 4.

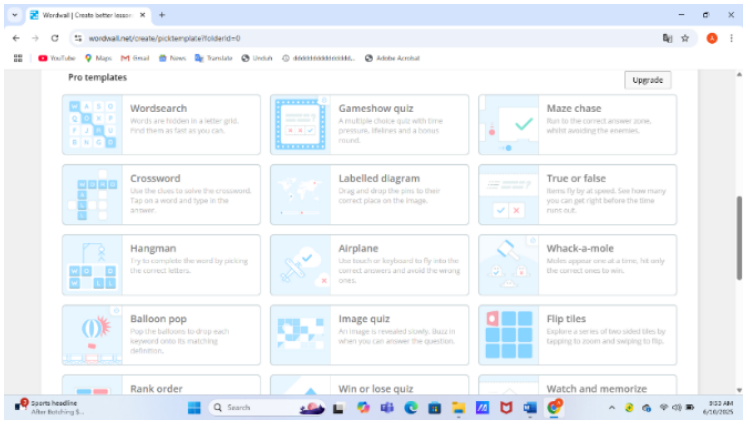

Figure 4. Template Interface Display

4. Figure True or False Feature Interface from Wordwall, which displays the layout for creating statements based on your learning material. he display of the 'True or False' feature is shown in Figure 5.

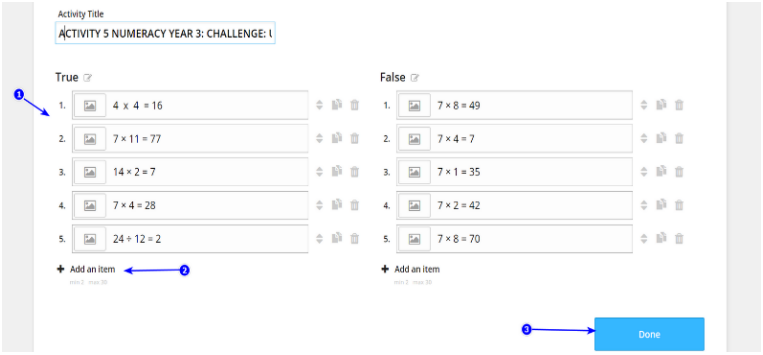

Figure 5. True or False Feature Display

5. After completing the activity, click "Done," then configure the theme, time limit, and other desired settings. Once these adjustments are made, the media is ready to be played. The Wordwall theme display is shown in Figure 6.

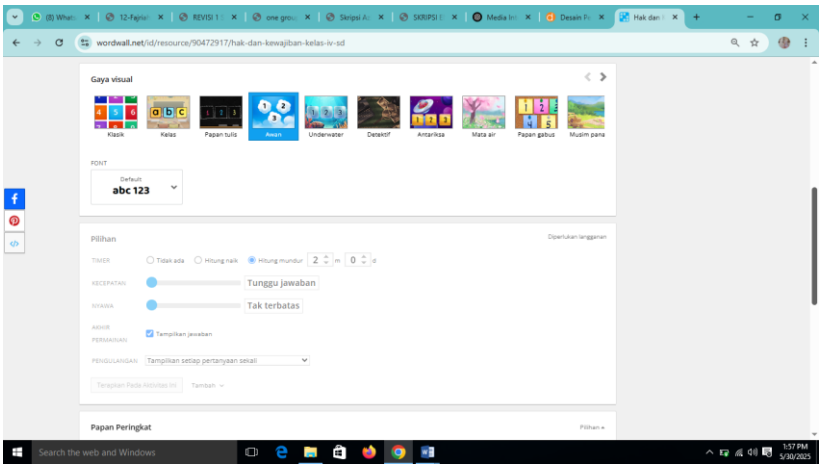

Figure 6. Wordwall Theme Display

Development Phase

In the development phase, the interactive learning media based on the Wordwall game that had been previously designed underwent a validation process by subject matter experts, language experts, and media experts. The validation was conducted by distributing validation questionnaires to assess the quality of the developed media. According to Sugiyono (2016:414), as cited in Apfani, (2022) product validation can be carried out by involving several experienced experts or professionals. Table 3 presents the validation results of the Wordwall-based interactive media using the Problem-Based Learning model, as assessed by experts.

Table 3. Overall Percentage of Instructional Media Validation

No	Aspect Evaluated	Percentage (%)	Validity Category
1.	Content Aspect	83, 3%	Valid
2.	Media Aspect	95%	Very Valid
3.	Language Aspect	81,25%	Valid
Average		86,56%	Very Valid

Expert validation results content validity testing was conducted by a subject matter expert, Drs. Zuardi, M.Pd, from UPP III PGSD UNP. The validation data was collected on April 21, 2025, yielding a percentage score of 83.3%, categorized as "Valid." Media validity testing was conducted by a media expert, Ms. Hana Shilfia Iraqi, M.Pd. The validation process involved two rounds of direct consultation. The first validation, conducted on April 17, 2025, resulted in a score of 83.75%, categorized as "Valid." After revisions were made, the second validation took place on April 21, 2025, resulting in a score of 95%, categorized as "Very Valid."

Language validity testing was carried out by a linguistics expert, Ms. Ari Suriani, S.Pd., M.Pd., through the distribution of a rating questionnaire. The data was collected on May 8, 2025, and resulted in a score of 81.25%, categorized as "Valid." Based on the data obtained after revision, the overall average score provided by the validators was 86.56%, categorized as "Very Valid."

Implementation Phase

The implementation phase involves applying the developed Wordwall-based interactive learning media, which has been validated by experts and deemed feasible for instructional use. A trial was conducted in Grade IV at SDN 20 Binuang Kampung Dalam on May 14, 2025, with 11 student participants consisting of 7 girls and 4 boys. Subsequently, implementation was carried out at SDN 10 Lambung Bukit on May 16, 2025, involving 11 students (3 girls and 8 boys). Distribution was then conducted at SDN 13 Kapalo Koto on May 26, 2025, with 11 students participating (5 girls and 6 boys). The researcher selected 11 students from each school as research samples.

A sample is a portion of the population selected for study (Mardhiyah et al., 2025). Sampling techniques are generally categorized into two types: Probability Sampling, in which every individual has an equal chance of being selected; and Non-Probability Sampling, which is based entirely on judgment, meaning not all individuals have the opportunity to be selected. One form of non-probability sampling is Purposive Sampling (Firmansyah & Dede, 2022). According to Arikunto (2010, as cited in Briilianty, 2020) purposive sampling is performed by selecting subjects based on specific objectives rather than through random or stratified methods. The intended goal is to ensure that the sample meets criteria determined by the researcher. The selected students possessed varied characteristics, based on academic performance and recommendations provided by homeroom teachers.

Evaluation Phase

The evaluation phase represents the final stage of the research. Evaluation was conducted at the end of the study by distributing questionnaires to both teachers and students, along with evaluation sheets to assess students' learning outcomes after using the Wordwall-based interactive media. The purpose of this evaluation was to provide constructive feedback to the users of the product.

4. Conclusion

The findings of this study indicate that the Wordwall-based interactive game learning medium meets validity criteria as evaluated by experts and was developed using the ADDIE instructional design model. Based on these findings, the media were deemed highly valid in terms of content, language, and media design, rendering them suitable for use in teaching and learning activities.

This media not only made the learning process more engaging and enjoyable but also successfully increased students' motivation, as it aligns with their learning needs and styles. Therefore, the use of interactive instructional media based on the Wordwall game can serve as a strategic innovation in the development of educational tools that are in line with technological advancement and the demands of 21st-century learning.

Limitations and Recommendations This study employed Wordwall-based interactive instructional media on a single core topic: Unit 2 of Pancasila Education, *Constitution and Norms in Society, focusing specifically on Rights and Obligations as Students and Family Members* in Grade IV. Future research may extend the development scope by incorporating an entire unit to create a more comprehensive learning media. It is recommended that subsequent studies explore the development of innovative instructional media for other topics within Pancasila Education or across different subjects, utilizing Wordwall-based interactive learning media to enrich classroom engagement.

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