

Design of a Digital Illustration-Based Storybook Using the R&D Method in Civics Education for Grade V Students

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ABSTRACT: This study aims to develop a learning media in the form of a digital illustration-based storybook that contains the values of diversity for use in Civics Education (PPKn) for fifth-grade students at SDN 4 Bajur. The development is motivated by the lack of engaging and relevant learning media, impacting low student interest and participation. This research uses the R&D method with the ADDIE development model consisting of five stages: Analysis, Design, Development, Implementation, and Evaluation. Validation results from three experts indicate the developed digital storybook is in the "highly feasible" category. Material experts gave an average score of 100%, language experts 87.5%, and design experts 91.6%. A trial with 26 fifth-grade students showed that 91.5% of students stated the media is highly feasible, and the post-usage test scored 89.5%. Thus, this digital storybook is suitable as an alternative learning media to enhance students' understanding and interest in learning diversity values in Civics Education.

Keywords: media development, digital storybook, diversity values, Civics Education, R&D, ADDIE

I. INTRODUCTION

Education is a conscious and planned effort to create a positive and enjoyable learning environment. Through this process, students are encouraged to actively develop their potential to build spiritual strength, self-control, personality, intelligence, noble character, and

skills useful for personal and social life [1]. Education plays an important role in efforts to enlighten the nation's life. Therefore, all parties involved in the educational process are expected to contribute optimally to encourage improving the quality of education in Indonesia [2].

Learning media has a very important role in the educational process in schools, as it can help facilitate the delivery of material, increase student understanding, and create a more interesting and interactive learning atmosphere [3]. Media developed through technology integration presents new innovations by combining various media formats that can be operated using computer devices. The rapid development of digital technology has brought a major transformation in the world of education. Digitalization of learning media can also be applied to Civics Education. This learning provides an understanding of social, national, and state life. In Indonesia, Civics Education aims to improve students' ability to internalize, understand, and apply Pancasila values as a basis for behavior in society, thereby forming responsible and reliable citizens [2].

The use of illustrated digital storybooks is an effective learning strategy to support the achievement of students' cognitive, affective, and psychomotor aspects. This media presents material with attractive and easy-to-understand visuals, thereby encouraging interest in learning, strengthening understanding, and shaping student character, especially in Civics Education lessons. However, a survey from KPAI revealed that the majority of children use gadgets not for learning (79%) and most have personal devices (71.3%) without adequate supervision. In response to these problems, this study aims to develop a digital illustrated storybook for PPKn learning on Diversity as Strength material. Through visual stories that illustrate the values of diversity, students are expected to apply these values in everyday life [4].

SDN 4 Bajar is an elementary school located in Labuapi District, West Lombok Regency. In the even semester of the 2024/2025 academic year, there are 28 students in grade V. In the learning process, especially in Civics Education (PKn) subjects, the grade V teacher at SDN 4 Bajar still predominantly uses conventional methods and less varied teaching media. This impacts the lack of interest and participation of students in understanding the material, especially the abstract values of diversity for elementary school students. On the other hand, students are currently very familiar with digital technology, so the use of contextual media is necessary. Based on this background, the formulation of the research problem is: How to design a digital illustration-based storybook using the R&D method for Civics Education learning on diversity as strength material for grade V SDN 4 Bajar? And how do students respond to the digital illustrated storybook in PKn learning? The research objectives are: 1) To implement the R&D (Research and Development) method in designing a digital illustration-based storybook for PKn learning on diversity as strength material in grade V SDN 4 Bajar; 2) To analyze student learning outcomes after using the digital illustration-based storybook media in PKn subjects on diversity as strength material.

II. RELATED WORK

Several previous studies are related to the design of digital storybooks using the R&D method in Civics Education learning.

Rezka et al. (2022) developed a Lift the Flap Book based on interactive multimedia for PPKn learning in grade V elementary school. The results showed a feasibility level from material experts of 76.9%, media experts of 97.2%, and language experts of 70.5%. Student trials showed results of 97.5% at the One to One stage and 88.4% at the Small Group stage [5].

Winata et al. (2020) developed graphic comic media for Civics Education on rights and obligations of society. Validation by material experts showed average scores ranging from 3.3-5.0 (good to very good), while media experts gave an average score of 3.5-4.0 (good category) [6].

Raihana et al. (2024) developed comic media based on Islamic stories to improve student character through Pancasila Education lessons in grade V elementary school. The feasibility test results of the picture storybook showed an average validity of 93% (very valid), practicality according to educators 91% (very practical), and student responses 94% in small tests and 97% in large tests (very practical) [7].

Dahnial (2024) developed a digital Pop-Up Book for PPKn learning on "My Country Indonesia" material for grade IV elementary school. The study found media validity of 94%, material validity of 80%, and language validity of 100%, all declared valid [8].

Muliani (2020) developed comic book learning media on history material in elementary schools. The media scored 82.67% from media experts (good category), 90% from material experts (very good category), and 88.71% from trials with 30 students (very good category) [9].

Based on these previous studies, this research has several differences. While most previous research also uses the R&D method, the distinction lies in the development model used. This research applies the ADDIE model (Analysis, Design, Development, Implementation, Evaluation), whereas previous studies varied in their approaches. Additionally, the output of this research is a digital illustration-based storybook specifically for diversity as strength material in Civics Education for grade V elementary school students, with illustrations created using Clip Studio Paint and presented via PowerPoint.

III. METHOD

This research uses the Research and Development (R&D) method with the ADDIE development model. The research was conducted from February to March 2025 at SDN 4 Bajar.

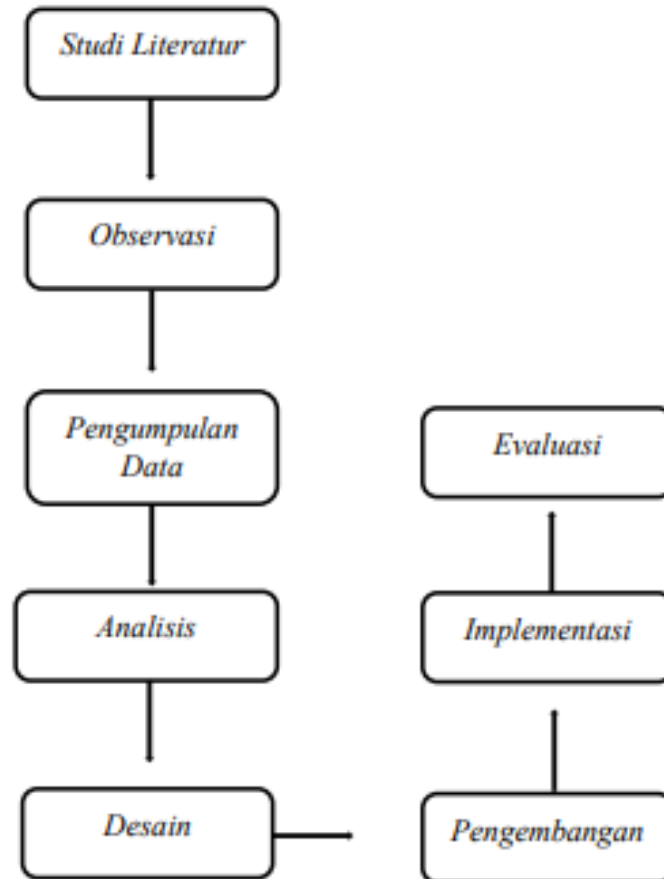


Figure 1: Research Procedure Flowchart

A. Research Object Identification

The object of this research is the Civics Education (PKn) learning process for grade V students at SDN 4 Bajar, specifically on the material "Diversity as Strength." The research subjects consisted of 26 grade V students and one grade V teacher.

B. Data Collection

Data collection was conducted through several methods:

- Observation: Direct observation of the PKn learning process in grade V to understand classroom dynamics, teacher-student interaction, and student responses to existing learning methods and media.
- Interview: A structured interview was conducted with the grade V teacher to gather information about teaching methods, challenges faced, and openness to digital learning media innovations.
- Questionnaire: Student response questionnaires were distributed after the implementation of the digital storybook to assess attractiveness, material understanding, and overall feasibility.

- Testing: Practice questions were given to students after using the digital storybook to measure their understanding of the diversity material.

C. Research Procedure

This research follows the five stages of the ADDIE model:

3.3.1 Analysis Stage

The analysis stage began with observation and interviews with the grade V teacher at SDN 4 Bajar. The main problems identified were: teaching materials were still limited to LKS (student worksheets) as supplementary material, digital media implementation was still simple, and the biggest challenge was limited facilities and infrastructure. The potential found was that the teacher was open to learning innovations, especially the use of digital illustration-based storybooks.

3.3.2 Design Stage

The design process for the digital storybook with the theme "Diversity as Strength" involved creating five main characters (Rabbit, Elephant, Dove, Monkey, and Mousedeer) representing diversity values. A storyboard was created using Clip Studio Paint containing sketches of each page, including character illustrations, backgrounds, and text placement.

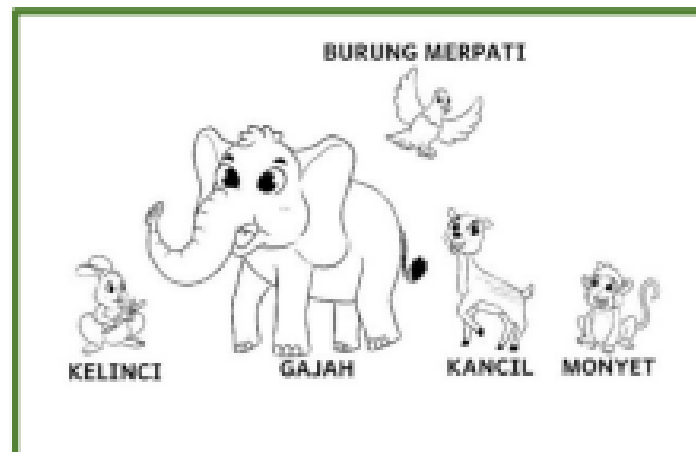


Figure 2: Character Sketch with Clip Studio Paint

3.3.3 Development Stage

Before the digital storybook was tested in class, it was first validated by three experts: material expert (grade V teacher at SDN 4 Bajar), language expert (Lecturer in Indonesian Language and Literature at UNIQHBA), and design expert (Graphic Designer/Illustrator). The validation used a Likert scale with scores of 1-4.

Table 1: List of Validators

No	Name	Expertise
1	Mariano Satya Plamularsih, S.Pd	Material
2	Randa Anggansta, M.Pd	Language
3	Ahmad Zul Karnaeen, S.Kom	Design

3.3.4 Implementation Stage

After validation and revisions, the digital storybook was implemented with 26 grade V students at SDN 4 Bajar. The media was displayed via PowerPoint slides projected using a projector in front of the class. After the learning session, students filled out response questionnaires and worked on practice questions.

3.3.5 Evaluation Stage

Evaluation was conducted by analyzing data from expert validation and student responses. The percentage score was calculated using the formula:

$$P = \frac{S}{N} \times 100\%$$

Where P = percentage score, S = total score obtained, N = maximum score.

D. Data Analysis

The feasibility criteria used to interpret the percentage scores are shown in Table 2.

Table 2: Percentage Score Criteria

Percentage Range (%)	Quantitative Criteria
86-100	Highly feasible
71-85	Feasible
56-70	Less feasible
≤ 55	Not feasible

E. System Evaluation

System evaluation was conducted by combining expert validation results and student response questionnaires to assess the overall quality of the digital storybook as a learning media for Civics Education.

IV. RESULT AND DISCUSSION

A. Expert Validation Results

4.1.1 Material Expert Validation

The material expert validation assessed the completeness of content, correctness of concepts, and systematic presentation. The results are presented in Table 3.

Table 3: Material Expert Validation Results

Criteria	Score (Max 4)
Suitability of material with basic competencies	4
Ease of understanding the story flow	4
Citizenship values reflected in the story	4
Accuracy of information/facts presented	4
Explicit display of character values	4
Ability to foster positive attitudes towards diversity	4
Total Score	24/24

$$P = \frac{24}{24} \times 100\% = 100\%$$

Based on the criteria in Table 2, the material expert validation scored 100%, falling into the "Highly Feasible" category.

4.1.2 Language Expert Validation

The language expert validation assessed the narrative structure and dialogue to ensure suitability for grade V students' comprehension. The results are shown in Table 4.

Table 4: Language Expert Validation Results

Criteria	Score (Max 4)
Suitability of vocabulary with student language development level	4
Ease of understanding sentences without multiple interpretations	4
Effectiveness of sentence structure according to Indonesian language rules	3
Consistency of language style with context	3
Appropriateness of punctuation and spelling with PUEBI	3
Ability to convey educational values and character clearly	4
Total Score	21/24

$$P = \frac{21}{24} \times 100\% = 87.5\%$$

The language expert validation scored 87.5%, falling into the "Highly Feasible" category.



Figure 3: Language Revision: Sentence effectiveness and punctuation correction

4.1.3 Design Expert Validation

The design expert validation assessed visual appearance, layout structure, interactivity, and suitability of media design with elementary school student characteristics. The results are presented in Table 5.

Table 5: Design Expert Validation Results

Criteria	Score (Max 4)
Neatness and clarity of image, text, and title arrangement	4
Consistency of color, font, text size, style, and illustrations	4
Suitability of colors and illustrations with story characters	4
Readability support from font size, type, and background contrast	3
Visual attractiveness to motivate reading and understanding	4
Interesting cover design to attract students' reading interest	3
Total Score	22/24

$$P = \frac{22}{24} \times 100\% = 91.6\%$$

The design expert validation scored 91.6%, falling into the "Highly Feasible" category.

B. Implementation Results

The digital storybook was implemented with 26 grade V students at SDN 4 Bajar. After the learning session, students filled out response questionnaires and worked on practice questions. Table 6 presents the results.

Table 6: Student Implementation Results

Parameter	Questionnaire Score	Practice Score	Total
Average Score	91.5%	89.2%	90.3%

Based on student assessments, the average questionnaire score was 91.5% (Highly Feasible), the average practice score was 89.2% (Highly Feasible), and the overall average was 90.3% (Highly Feasible).



Figure 4: Documentation of Digital Storybook Implementation in Class

C. Discussion

Based on the development and trial results, the digital storybook media developed has proven to increase student engagement and understanding of Civics Education lessons, especially on diversity as strength material. The validation results showed material experts scored 100%, language experts 87.5%, and design experts 91.6%, all falling into the highly feasible category. Expert validation indicates this media meets the requirements in terms of content, language, and design.

When trialed with grade V students at SDN 4 Bajar, the digital storybook received positive responses. The average student questionnaire score of 91.5% indicates that students found the media attractive and easy to understand. The practice score average of 89.2% demonstrates good understanding of the diversity material. These results align with previous studies by Rezka et al. (2022), Raihana et al. (2024), and Dahnial (2024), which also reported high feasibility for digital learning media in Civics Education.

The success of this digital storybook can be attributed to several factors: (1) the use of animal fable characters that are familiar to elementary school students, (2) bright colors and expressive illustrations that attract student attention, (3) simple language appropriate for grade V students' comprehension level, (4) presentation of diversity values through an engaging story rather than direct instruction, and (5) the use of PowerPoint media that is easy for teachers to operate with available school facilities.

The main limitation of this research is that the digital storybook is presented in PowerPoint format, which has limited interactivity compared to dedicated e-book or mobile applications. Additionally, implementation requires adequate projector and computer facilities.

V. CONCLUSION

Based on the research and development results using the R&D method with the ADDIE model, the following conclusions can be drawn:

1. The development of the digital storybook containing diversity as strength values was carried out through five ADDIE stages. The analysis stage was conducted through observation and interviews with the teacher and identification of student needs. The design stage produced a storyboard and story concept with main characters representing diversity. The development stage involved creating the media through design applications and assessment by validators before testing. The implementation stage was conducted through limited trials in grade V SDN 4 Bajur. The evaluation stage was conducted by analyzing data from expert validation and student responses.

2. Validation results from three experts showed that this digital storybook is feasible for use: - Material expert validator gave an average score of 100% (Highly Feasible) - Language expert validator gave an average score of 87.5% (Highly Feasible) - Design expert validator gave an average score of 91.6% (Highly Feasible)

3. Grade V student responses to the digital storybook showed high interest and understanding. Of the 26 students who filled out the questionnaire, 91.5% stated this book is

highly feasible for use, with practice scores reaching 89.2%. The overall student assessment average was 90.3%.

Recommendations for future research and development:

- For teachers: This digital storybook can serve as an alternative enjoyable and educational learning media, especially for delivering PPKn material containing character values.
- For schools: Schools should facilitate the use of digital media as part of the learning process, including providing supporting devices.
- For future researchers: Similar media can be developed using more interactive technology and can cover materials from other subjects.

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