

# DEVELOPMENT OF DIGITAL COMIC LEARNING MEDIA BASED ON SCIENTIFIC APPROACH AS CHARACTER STRENGTHENING IN 2<sup>nd</sup> GRADE OF ELEMENTARY SCHOOL

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## Article Info

### Article history:

Received: 14-12-2022

Revised: 28-12-2022

Published: 30-01-2023

### Keywords:

Character education  
Digital comic media  
Scientific

## ABSTRACT

The development of digital comic media as an effort to provide innovation and education in character education in learning material on religious diversity is based on several gaps, including: 1) students' lack of understanding of religious diversity in Indonesia, 2) lack of student understanding of tolerance, 3) The way teachers provide religious diversity material is conventional and only based on books. The purpose of this research to find out digital comic media development and implementation at SDN 2 Golong. Based on the problems that have been described, the development aims to produce valid digital comic media for grade II students of SDN 2 Golong. The development of this digital comic media used the ADDIE development model. There are 5 stages in the development process that have been carried out in this research, namely 1) analysis, 2) design, 3) development, 4) implementation, and 5) evaluation. The assessment of digital comic media was carried out by material experts, media experts, educators, and second grade students at SDN 2 Golong. The results of the research showed that the development of digital comic media show that the percentage obtained from material expert validators, which is 85% with a very valid category and suitable for use without improvement, the value obtained from media expert validators, is 91.25% with a very valid category and suitable for use without improvement. but there are still revisions. Furthermore, the results of the educator's trial 91% with a very valid category and suitable for use without improvement. The results of field trials were carried out with 20 students with a percentage of 88% in the very interesting category. Based on the results of the data analysis, it can be concluded that the development of digital comic media is fit and possible to used as a media learning.

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## 1. INTRODUCTION

Character education is a human activity that involves educational activities that aim to develop a child's personal character so that it is better and beneficial for oneself and the environment as a human being. According to Panggabean (2021), Character education includes all teacher activities that have the potential

to influence student character. Teachers contribute to the development of student personality. This concerns the exemplary teacher in conveying information, the level of teacher tolerance, and various other issues (Suid, 2017; Sumaryati, 2017).

At this time in Indonesia experienced an extreme moral decline (Darmaningrat, Ali, Wibowo, & As-tuti, 2018). There are lots of cases that show moral decline among teenagers, such as the rampant cases of violence that kills someone's life, bullying, rape, and many more. Besides the reality on the ground, based on research conducted at SDN 2 Golong, the homeroom teacher for class 2 states that there is still a lack of students in implementing education. character, but only a few have been carried out such as religious attitudes, self-reliance for grade 2 students is good enough. But there are some students who have not been able to instill character education and there needs to be more efforts to improve it. Such as lack of tolerance in religion (likes to make fun of friends of different religions), lack of courtesy towards teachers, unable to control their anger which leads to beatings of friends and teachers. So it is necessary to strengthen character education so that students can appreciate the differences that exist, and can hold anger and create a sense of peace (Falahudin, 2014).

All tools (assistance) and goods used in teaching and learning activities for the purpose of providing educational messages (information) originating from (teachers or other sources) for recipients are considered learning media (in this case students or learning residents). In addition, according to Weberauler, Omadara, and Adu (in (Apsari et al. (2020)) Educational media, on the other hand, refers to communication channels that transmit messages for educational purposes. The application of media not only helps and expedites the learning process, but makes it more interesting and fun. Sanjaya (in (Lesilolo (2017)) and Maisyarah & Lena (2020), Digital comics are a medium in the form of applications which contain comics about strengthening character education that tell about tolerance and bullying in the school environment that are easily understood by students. Hayati et al. (2016), defines comics as a type of cartoon in which characters are revealed and stories are told in a sequence that is directly related to the visuals and is intended to please the reader. Meanwhile, McCloud, (2001), As a type of visual communication, comics use images and other symbols to convey information and/or provoke an emotional response from their readers. Advantages of Digital Comic Media according to Trimo (in Juni Samodra, (2015)) as follows:

“Judging from its advantages, comics can attract students' enthusiasm in learning and teach students to translate stories into pictures so that students can remember things longer. The material contained in comics can explain the whole story because there are illustrated pictures that can make it easier for students to know concrete forms or examples regarding the intent of a material. Can develop students' interest in reading and one of the other fields of study.”

According to the results of these observations, the researcher wants to innovate in learning activities by offering solutions to these problems with digital comic media. Comics are works of art in the form of 2 dimensions or in the form of visual images combined with text. Comics can also be developed as an interesting learning media. According to Rahmayani (2019), that comics have a large enough role to provide information that educates, entertains, as well as influences the essence of the function of communication. The advantages of digital comics are that they are not out of date, easy to distribute and are participatory. These benefits are very interesting if digital comics can be developed in the field of education and become a game changer in terms of selecting educational media in schools (Ferennita, 2018). In accordance with the description of the background above, the basis for conducting research on “Development of Digital Comic Learning Media Based on a Scientific Approach as Character Strengthening for Grade 2 Elementary Schools”. The development of digital comic media will be tested on grade 2 students at SDN 2 Golong.

## 2. RESEARCH METHOD

The development model design refers to ADDIE research and development which means Analyze, Design, Development, Implementation, Evaluation. This research is based on students who have not been able to behave in tolerance. Furthermore, the results of the development of digital comic media will be tested on grade 2 students at SDN 2 Golong. The procedure in this development uses the ADDIE development model (Wilujeng, Tadeko, & Dwandaru, 2020). In the first stage of doing the analysis, this activity focuses on (1) problem analysis, (2) student analysis, (3) task analysis, (4) concept analysis, (5) analysis of the formulation of learning objectives. designing digital comics that will be developed by researchers. The third stage, namely

developing / developing the media, at this stage validation was also carried out with 3 validators (instrument experts, media experts and material experts) on digital comic media. The fourth stage is conducting a trial using the product being developed, and when the trial process takes place the trial subject fills out a student response questionnaire. The fifth stage is evaluation, with the intention of evaluating the product at each stage of the ADDIE model (Supriyanto, Suparman, & Hairun, 2020).

This study used several research instruments, namely observation and documentation questionnaires. The preparation of the scale questionnaire used uses a Likert scale (four scales) so the assessment is number 4 for very good information, and number 3 for good information, while number 2 for poor information, and number 1 for bad information. Assessment of the questionnaire is carried out by material experts by giving a checklist symbol in the column provided. Giving a checklist symbol is adjusted according to the responses from the statements in the questionnaire. Observations were made before the creation of digital comic-assisted media based on problems that occurred at school. Observations were made to determine the initial conditions of SDN 2 Golong. Documentation is a data collection strategy that has a relationship with the research problems that have been studied.

### 3. RESULT AND DISCUSSION

#### 3.1. Digital Comic Media Development Process

Based on the process of developing digital comic media which refers to the ADDIE model, there are 5 stages of development that have been carried out, namely:

##### 1. Analysis

- Syllabus Analysis: At this stage the researcher is looking for information about the indicators to be achieved during the learning process in the class 2 syllabus on theme 3 My Daily Tasks 3 (My Tasks as a Religious).
- Analysis of Learning Resources: Analysis of learning resources is useful for the next step in selecting appropriate learning aids and supports the learning process.
- Needs Analysis: This needs analysis is prepared based on the problems found in the class during the observation activities. At this stage, facts and alternative solutions are raised to make it easier to determine the first steps in developing appropriate digital comic media to be developed.

##### 2. Design

This second stage produces designs that are used in the development of digital comic media.

Table 1. Main Character Characteristics

Characters	Characteristics and Personality
Besut	1. Height 120 cm 2. Friendly, kind, wise, and cheerful 3. Muslim
Rusmini	1. Height 120 cm 2. Calm, somewhat quiet, wise, and shy but friendly 3. Confucian
Sumo	1. Height 130 cm 2. Have a slightly fat body 3. Kinda geeky, kind, and friendly 4. Muslim
Man Gondo	1. Height 130 cm 2. A little selfish but good 3. Christian

- Plot Design

Next, Will write a synopsis or plot summary for the comic. By using this plot design, digital comic learning media can develop story plots and events in such a way that the narrative is interesting, complete, and structured. Consider who the protagonist is; what topics will be covered in the story; and where the story will be taken when building the storyline. The plots that will be used as the basis of reference are as follows:

- Key Actors: Cerita ini diperankan oleh siswa SD kelas 2 yaitu Besut, Rusmini, Sumo, serta Man Gondo mempunyai perlaku khas sendiri-sendiri.

- Theme: The topic raised is educational stories in everyday life.
- Story Direction: The storyline is emphasized on everyday life in the school environment.
- Plot Description: Besut, Rusmini, Sumo, and Man Gondo are grade 2 students who have different religions but they are very good friends. But one day they had to do group work and choose a day to do the task together but had to choose a day that did not coincide with their worship day.
- Character design: Character design requires consideration of appearance, character and other relevant factors showed on the Table 1.
- Then make a rough outline as shown below.



Figure 1. Character Design View

- Storyboard: Making a storyboard is done by drawing a mattress which starts with making panels, initial sketches and dialogues.



Figure 2. Storyboarding view

- Manuscript and Recreating Comic: During this stage, a rough sketch will be created and the manuscript will be transferred to digital form using the Clip Paint Studio software. At this stage, all coloring,

backdrop creation, and typography are completed



Figure 3. Display of Recreating Comic Results

After the recreating comic process is complete, media development is ready to proceed with the book-binding process.

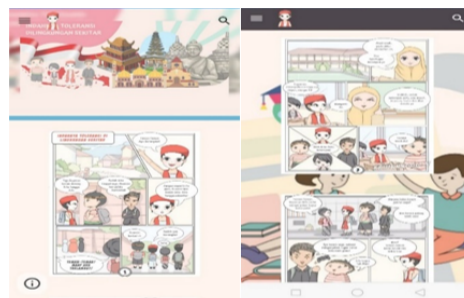


Figure 4. Media viewing through an application on a smartphone

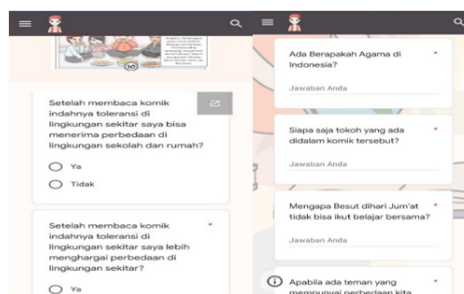


Figure 5. Choice questions and essay questions on comic applications

### 3. Development

- Validation

Conducted to determine how appropriate the media that has been developed can be applied during learning activities. The validation assessment carried out was media and material.

- Revision

Revisions are made after the validation process is complete. The revision material comes from the assessment of the media and material validators. The media is revised according to the validator's directions so that products that are feasible to be submitted as media in learning activities can be obtained.

#### 4. Implementation

The implementation stage was held to find out the results of digital comic media which were developed in accordance with the revisions and suggestions that had been obtained from the media validator and also the material validator. Researchers involved 20 grade II students at SDN 2 Golong who focused on Indonesian spelling material.

#### 5. Evaluation

The evaluation stage contains all revisions obtained from suggestions and comments from filling out the questionnaire from material experts and media experts. Digital comic media can be said to be valid or not seen from the results obtained through expert validation questionnaires and from student interest questionnaires in digital comic media. Student responses were used by researchers as a reference in the application of digital comic media.

### 3.2. Quality of Digital Comic Media Material on Religious Diversity in Class II Schools of SDN 2 Golong

The quality of digital comic media can be identified through the evaluation of experts, namely media experts and material experts. Assessments from media experts obtained a presentation score of 91.25% which is in the very valid category. While the score obtained from material experts obtained a presentation score of 85% where this value is included in the very valid category, it can be concluded that digital comic media is suitable for use as a learning medium on religious diversity material for class II SD.

Table 2. Validator Assessment Results

Validation	Percentage	Criteria
Instrument	84,3	Very Valid
Content	85	Very Valid
Media	91,25	Very Valid
<b>Average</b>	<b>88,125</b>	<b>Very Valid</b>

### 3.3. Implementation of Digital Comic Media Material on Religious Diversity in Grade II Schools at SDN 2 Golong

The implementation stage is the stage where the product is implemented or tested resulting from the development of digital comic media. The implementation was carried out to understand the results of the digital comic media being developed.

Table 3. Educator Response Questionnaire Recapitulation

Validation	Percentage	Criteria
Classroom teacher	91,25	Effectively used without revision

Table 4. Students Response Questionnaire Recapitulation

Validation	Percentage	Criteria
2nd Grade Student	88	Very Interesting

Product application activities that have been developed to students. Product implementation activities that have been developed can be carried out after expert validation tests have been carried out and declared valid. The product trial was carried out on June 21 2022 involving 20 grade 2 students at SDN 2 Golong. The objective of the product trial was to assess the product that had been developed based on an assessment of aspects of product users or students. Product trial activities are carried out face-to-face while still implementing health protocols. The series of product trial activities carried out were as follows: application and explanation of cursive letters material, detailed explanations to students, and student response questionnaire filling activities.

Based on the student response questionnaire filling data, the researcher provided an analysis that after testing digital comic media products, an average number of 88% was obtained. The score obtained from all students is 753 out of the maximum score in total 777. If this value is based on the interpretation of the score, the value is included in the very interesting category

#### 4. CONCLUSION

According to the results of the research that has been carried out, the development of digital comic media for character education material is obtained. In development research using the ADDIE development research model (analysis, design, development, implementation, evaluation). This development research was carried out starting from the analysis stage, the design stage, the development stage, the implementation stage, the evaluation stage. In the trial results of the development of digital comic learning media, a score of 777 was obtained from a maximum result of 880 and after analysis and percentage of the value obtained a result of 88% with a very interesting category which means students can accept digital comic learning media well. It can be concluded that based on the trial development of digital comic media, this shows significant results. And grade 2 students are also able to receive character education material learning using digital comics well.

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