

# Developing Learning Video Based on Plotagon in Civics Education Subject at Xaverius 3 Elementary School

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## ABSTRACT

This research aims to develop learning videos using the digital application Plotagon in the PPKN (Civics Education) subject for third-grade students at Xaverius 3 Elementary School in Palembang. The development is conducted using the ADDIE model, which includes the stages of analysis, design, development, implementation, and evaluation. The subject of the research consists of third-grade students, comprising three participants in the one-to-one stage, six participants in the small group stage, and fifteen participants in the field test. Data collection is conducted through interviews, tests, and questionnaires. The results show that the development of learning videos is deemed feasible, with percentages of 79.2% from material experts (valid category), 94.6% from language experts (very valid category), and 62.5% from video experts (sufficiently practical category). In the student trial stage, the video received a percentage of 86, 67% in the one-to-one test (a convenient category), and 77% in the small group test (a practical category), with an average of 81.83%, which falls into the practical category. Furthermore, the field test results show an average percentage of 80% in the convenience category. These results affirm that the Plotagon application-based learning video developed is suitable, practical, and effective for use in the learning process.

## Keywords:

ADDIE, Video, Plotagon, PPKN, Pancasila

## INTRODUCTION

Civic education (PPKn) is a fundamental subject that plays a role in shaping students' character to be nationalist, have a good personality, and understand the values of nationalism. According to Magdalena et al. (2020), Civics Education encompasses the concept of attitudes and morals, emphasizing the formation of intelligent, skilled, and characterful citizens in accordance with the law. Kurniawan (2023) added that the success of character education is largely determined by how Civic Education is implemented in schools. At the elementary school level, Civic education plays a strategic role as the foundation for shaping students' character in accordance with the values of Pancasila. The purpose of Civics education is not only to enhance conceptual understanding but also to instill attitudes and skills that reflect the values of Pancasila in daily life. This is in line with the opinion of Solihin et al. (2024) that Civic education functions to cultivate students' awareness as responsible citizens and equips them with the basics of national defense. Pratiwi et al. (2021) also emphasize that Civic education is directed at shaping citizens who are able to make positive contributions to the nation and the state.

However, the reality shows that Civic education still faces various obstacles. Students often consider this subject boring due to the dominance of lecture methods that are theoretical and less interactive (Nurlaila, 2024). Aritonang et al. (2023) also found that many teachers have not designed Civic education lesson plans effectively, causing the learning process to tend to be monotonous. Mahmudah et al. (2025) emphasized that the limitations of media and variations in methods also affect the low effectiveness of learning, making students bored and less active. The

observation on July 10, 2025, at Xaverius 3 Elementary School, Palembang, showed that Civic Education still heavily relied on textbooks, blackboards, and lecture methods. The use of interactive and digital media is still minimal, and even the use of PowerPoint is rarely done. As a result, students tend to be passive, less engaged, and have difficulty understanding abstract concepts. This situation implies low participation and limitations of students in relating the material to real-life situations.

One of the important topics in Civics Education is "*Ayo Memahami Pancasila*". This topic aims for students not merely to memorize the five principles of Pancasila, but also to understand their meanings and practice their values in daily life. However, the abstract nature of the material often makes it difficult for students to grasp it concretely. For example, they are able to memorize the third principle of Pancasila, "*Persatuan Indonesia*," but have not yet understood that this value can be realized by respecting differences at school. Therefore, learning that is contextual, interactive, and close to students' lives is needed. The development of educational technology through the *Merdeka* Curriculum provides a great opportunity to address these challenges. The *Merdeka* Curriculum encourages teachers to utilize digital media, such as animated videos, simulations, and interactive learning applications, to create more meaningful and student-centered learning. Research by Solihin et al. (2024) shows that the use of educational videos has been proven to enhance students' conceptual understanding and learning motivation.

One of the potential innovations is the use of the Plotagon application. Plotagon allows teachers to create animated videos with characters, settings, and narratives tailored to learning needs. Silalahi et al. (2024) revealed that animation in learning can attract students' interest in learning. Khoirun et al. (2023) also emphasized that the integration of digital technology in Civic Education can enhance interaction as well as active participation of students. However, previous studies generally only discussed the use of learning videos in general without specifically reviewing the utilization of Plotagon. Thus, the development of Plotagon-based learning videos on the topic "*Ayo Memahami Pancasila*" for third-grade students at Xaverius 3 Elementary school, Palembang, becomes important and relevant. Through the ADDIE model which includes the stages of analysis, design, development, implementation, and evaluation, the resulting media is expected to be valid, practical, and effective (Nurmalasari & Ediantoro, 2020) Validity ensures the content alignment with the curriculum, practicality ensures ease of use by teachers and students, while effectiveness emphasizes the media's contribution to improving learning outcomes and internalization of Pancasila values. This research is expected not only to improve the quality of the Civics education learning process but also to provide practical contributions for teachers in utilizing digital media innovatively, as well as supporting the achievement of the Pancasila Student Profile in the digital era.

## METHOD

This research uses the developing method with the ADDIE model, which consists of the stages of analysis, design, development, implementation, and evaluation (Nurmalasari & Erdiantoro, 2020). The product developed is a learning video based on the Plotagon application for the Civic Education subject for third-grade students of Xaverius 3 Elementary School, Palembang. The sampling method used was purposive sampling, where samples were taken from IIIA in one stage by

test of three students, IIIC in a small group stage by test of six students, and IIIB in a field test stage by test of 15 students. This class was chosen because, according to discussions with the teacher, it has a diverse range of learning achievements from students with high, medium, and low abilities.

This study uses the ADDIE model, with the first step being the analysis stage, which involves reviewing the curriculum, materials, needs, and learning media used by teachers to identify their alignment with learning outcomes. Second, the design stage focuses on formulating learning objectives, selecting materials, preparing learning activities, and creating storyboards. Third, the development stage includes creating media based on Plotagon and preparing assessment instruments. Fourth, the implementation stage is carried out through expert validation, one-to-one test, small group test, and field test. Fifth, the evaluation stage is carried out by revising the product based on trial results to make it valid, practical, and effective (Hidayat & Nizar, 2021). The data collection techniques in this study consist of documentation, interviews, tests, and questionnaires. Documentation includes curriculum and textbooks, interviews with classroom teachers to explore learning needs, tests (multiple choice and essay) to measure students' understanding, as well as Likert scale questionnaires for expert validation and students' responses. Data analysis was carried out descriptively. Quantitative data were analyzed by calculating the mean and percentage to assess the validity, practicality, and effectiveness of the media, while qualitative data from interviews were analyzed through reduction, presentation, and drawing conclusions.

**Table 2** Product Validity Criteria

Category	Range of Values
Very Valid	$\geq 85\%$
Valid	70% - < 85%
Fairly Valid	55% - < 70%
Less Valid	40% - < 55%
Invalid	< 40%

Source: Luthfi, 2023

## RESULT AND DISCUSSION

### Result

The first stage is the analysis stage, carried out to identify the needs and initial conditions of learning as the basis for media development. This analysis covers four main aspects, namely curriculum, material, learner needs, and media. The following table shows the result of the analysis that has been carried out.

**Table 2:** Result of the analysis

Aspect	Finding
Curriculum	The curriculum used is the Merdeka Curriculum. The research material focuses on the topic "Ayo Memahami Pancasila," a Civics education subject in phase B. Learning outcomes emphasize understanding and applying the value of Pancasila. The learning objective is to identify the principles, explain their meanings, and provide examples of behavior in accordance with the values of Pancasila.
Material	The civics education subject is dominated by the teacher and question-and-answer methods. Textbooks are the main source. Digital videos are rarely used, student interaction is limited, and learning tends to be one-way.
Learner needs	by questionnaire, 80% of students stated that learning is more interesting with animation/videos. 76% of students stated that easier to understand through moving images and sound. 64% of students stated that feel bored if only using textbooks. 72% of students stated that want to use learning videos that can be used independently at home.
Media	Media used: textbooks, simple Powerpoint presentations, and YouTube videos. Videos are often not aligned with the local context and learning objectives. There is a need for media that is structured, engaging, relevant, and easily accessible, such as Plotagon-based animations.

Based on the result of curriculum, material, learner needs, and media analysis, it was found that the development of Plotagon-based learning videos is necessary to support the achievement of learning objectives. These findings then serve as the basis for the design stage, which focuses on formulating objectives, selecting materials, and preparing learning activities and storyboards. The design stage is carried out after the analysis is completed, with the aim of developing a Plotagon-based learning media design that meets the needs of students and learning outcomes. At this stage, the researcher formulates learning objectives based on the Civics education learning outcomes in phase B. The learning objectives are *student are able to mention the sounds and symbols of the Pancasila principle, and explain the meaning of each principle, and provide examples of behavior in accordance with Pancasila values at home, school, and in the community*. The selected material includes Pancasila as the foundation of states, the symbols and meanings of each principle, as well as the application of its values in daily life. Then, developing learning activities in the form of an interactive dialogue flow between the teacher and students using simple language appropriate for third-grade students. This activity is then visualized in the form of a storyboard, which includes background scenes, character movements, expressions, and supporting text, making it easier to develop the media in the next stage.

After the initial design consisting of learning objectives, materials, scenarios, and storyboard is systematically arranged in the design stage, the next step is to realize the design into a tangible product through the development stage. In the development stage, the researcher began to realize the design that had been prepared by developing a learning video based on the Plotagon digital application. The development process was carried out gradually, starting from creating the main characters, namely Bu Rani (teacher), Vito (male student), and Loli (female student), designed according to the storyboard to ensure visual consistency. The setting chosen was a classroom relevant to the context of Civic education materials. Next, created dialogues between characters according to the script developed in the design stage. The dialogues were typed directly into the Plotagon application with adjustments to facial expressions, body gestures, and voice intonation to make the animation lively. The language used was kept simple and communicative, and subtitles were added for important parts such as the Pancasila principles, symbols and their meanings to facilitate students' understanding. To enhance appeal, the researcher added light background music and smooth transitions between scenes, so that the video flows coherently from the opening to the closing. The final result was a seven-minutes video in MP4 format, which was then internally tested to ensure there were no technical errors before being validated by experts. In addition, the researcher also prepared research instruments used to assess the feasibility of the product as well as the students' responses to the learning video.

The instrument consists of an expert validation sheet and a student response questionnaire. The expert validation sheet is intended for validators, including subject matter experts, media experts, and language experts. Assessment uses a 1-4 Likert scale, covering aspects such as the suitability of the material with the learning outcomes, conceptual accuracy, information currency, visual display quality, design consistency, color selection, text readability, language clarity, appropriateness of language to student development levels, and coherence of presentation flow. Meanwhile, the student response questionnaire is used to determine the practicality and appeal of the video in supporting the learning process.

After the learning media product has been developed according to the design, the next step is to ensure its feasibility through a validation process by experts. This validation stage serves as the initial part of implementation to assess the suitability of content, language, and media presentation before being used in classroom, along with the table of expert validation test result.

**Table 3** Experts Validation

No	Aspect	Sum of score	Score	%	Category	Description
1	Material	24	21	87,5	Very valid	No misinformation, just minor revise on the presentation structure.
2	Question of assessment	24	19	79,2	Valid	Need to revise the number of questions, answer key, and scoring
3	Language	28	27	96,4	Very valid	Minor revision regarding the use of capital letters
4	Media	40	25	62,5	Quite valid	Revision of audio, visuals, characters, subtitles, and learning flow.

Based on the Table III, it can be seen that the material aspect received a score of 21 out of 24 with a percentage of 87,5%, categorized as very valid. The assessment plan that has been made received a score 19 out of 24 with percentage 79,2%, categorized as valid. This indicates that the learning content aligns with the curriculum, is age-appropriate for students, and is capable of fostering Profil Pelajar Pancasila. Furthermore, in terms of language, the video script scored 27 out of 28 with percentage of 96,4% categorized as highly valid. This result confirms that the language usage is communicative, follows language rules, and is easy to understand for elementary school students. Meanwhile, regarding the media aspect, the product scored 25 out of 40 with percentage 62,5%, which falls into the fairly practical category. According to the experts some revision still needed especially regarding audio quality, character selection, scene sequence, and the addition of visual elements to enhance learners' understanding. Overall, the validation results indicate that the Plotagon-based learning video with the theme *Ayo Memahami Pancasila* is deemed feasible for implementation after revisions have been made based on expert. After revision process, the next step is to conduct a trial on the students to determine the practicality and effectiveness of the media in supporting the learning process. Below is the table of student trial results.

**Table 4** Student tes result

Trial Phase	Sum of subject	Result (%)	Category	Description
One-to-one	3	86,67	Very practical	Respondents score: High: 97,5% Med: 87,5% Low: 75%
Small group	6	77	Practical	Respondents score: High: 90% Med: 77,5% Low: 65%
Field tesr	15 (a class)	80%	Very practical	12 out of 15 students rated the media as very practical.

Based on the overall result of the trials, it can be seen that at the one-to one stage, two students gave ratings in the very practical category with percentage of 87,5% and 97,5%, while one student gave rating in the practical category of 75%. In the Small group stage involving six students, there were two students who gave an assessment in the very practical category, namely 90% and 80%, three students in the practical category at 75% and 77,5%, and one student in the fairly practical category at 65%. In the field test stage involving fifteen students, twelve out of fifteen students gave rating in the very practical category with percentage range of 85%-97,5%, two students in the fairly practical category with scores of 60% and 77,5%, and one student in the in the less practical category with a score of 50%.

In addition to completing the response questionnaire, the researcher also conducted formative assessment to measure the students' understanding of the material pertaining in the Plotagon video. Here are the results of the students' assessment.

**Table 4** Student assessment result

Score	Sum of student	Category
90	1	Very good
80-89	5	Good
75-79	6	Fairly good
72,5	3	Enough
Total	15	

The assessment result of students' showed that 1 student (6,7%) achieved a very good category with a score of 90%, 5 students (33,3%) were in the good category with score of 80-89%, 6 students (40%) were in the fairly good category with scores of 75-79%, and 3 students (20%) were in the enough category with a score of 72,5%. Overall, the majority of students score above 75%, indicating that the Plotagon-based learning video developed can be considered effective in enhancing students' understanding of Pancasila.

## Discussion

Plotagon has demonstrated a transformative effect in civics education at Xaverius 3 Elementary School Palembang, enhancing students' understanding and engagement in the learning process. The application of multimedia learning, as discussed by Mayer (2019), corroborates this assertion, emphasizing how the integration of text, audio, and visuals optimizes cognitive processing among learners. This supports the findings that Plotagon serves as both an educational aid and a facilitator of active learning, diverging from traditional lecturing methods that often leave students disengaged. Animation-based videos, as shown in the research by (Masfufah & Wibowo, 2024), effectively convert abstract concepts into accessible and relatable material, fostering a deeper understanding among students about civics and Pancasila's core values. Such visual aids are particularly pertinent in civics education, where concrete examples reinforce theoretical principles, allowing students to relate civic concepts to their daily realities.

In the context of civic education, particularly regarding Pancasila, the integration of Plotagon technology provides an innovative avenue for engaging learners through interactive multimedia, which has been shown to significantly enhance motivation and enjoyment in the learning environment. Hidayah (2023) affirms that using such interactive methods in civic education is effective, which underlines its potential utility across different subjects. However, the adoption of digital media in the classroom is not without hurdles; challenges related to audiovisual quality and the contextual relevance of content connected to Pancasila values highlight the need for continuous improvements in instructional design. Genre-specific studies suggest that infrastructure readiness and teacher support are fundamental to realizing the benefits of interactive videos for value engagement and reflection.

The practical implications of this study are manifold. There is an urgent need for educators to embrace interactive digital technologies to align with modern curricular demands, especially those that prioritize contextual learning and the development of Pancasila's student profile. Schools are therefore encouraged to improve the technical quality of animated educational media and ensure its integration into learning environments, extending opportunities for students to engage with innovative forms of learning. Additionally, exploring the efficacy of animated video models across diverse subjects can cultivate a richer and more stimulating educational experience for elementary students. Ultimately, this research underscores that Plotagon-based videos are not only a viable medium for civic education but also pivotal in developing attitudes that align with Pancasila's values, facilitating the holistic achievement of national educational objectives.

As our society continues to evolve, the role of civic education becomes increasingly critical, particularly in shaping young citizens who are informed and engaged. The study by Febrianti (2025) reiterates this necessity, emphasizing the role of education in developing civic literacy and character among students in an increasingly digitalized world. Therefore, this investigation confirms not only the relevance and effectiveness of Plotagon in civics education but also posits that animated media can foster both academic understanding and character development, thereby fulfilling the broader educational aims of nurturing responsible and ethically aware individuals within Indonesian society.

## CONCLUSION

Based on the discussion, can be concluded that the developing of Plotagon-based videos in the Civic Education for third grade students in the theme *Ayo Memahami Pancasila* are relevant, practical, and effective. The development was carried out using the ADDIE model. The results are as follows, 1) based on expert validation about visual, material and language aspects, the video obtained a feasibility percentage of 79,2%, 96,4% of material validity and 62,5% of visual and got revision; 2) based on the result of one-to-one stage with three students and obtained a percentage of 86,67%, which falls into the very practical category. Based on the small group stage involving six students, the video received a percentage of 77%, categorized as practical. The average percentage of both is 81,83%, indicating that the developed learning video is practical to use in the learning process; 3) the result of field test indicated that the development of Plotagon-based video received a percentage of 80% and categorized as very practical.

This study shows that the development of the Plotagon-based videos as a learning media can enhance student engagement and comprehension, as reflected in positive responses and the practicality of its use in the classroom. However, this study has several limitations, particularly regarding the limited sample size and the relatively narrow scope of the research, which may affect the validity and generalizability of the findings. These limitations need to be critically considered when interpreting the results. Therefore, future researchers are recommended to increase the number of subjects, enrich the research context, and refine the methods used in order to obtain more comprehensive evidence.

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