



Needs analysis of animated video media based on environmental care character in Pancasila education

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ABSTRACT

Students' environmental awareness remains relatively low, whereas Pancasila Education holds the potential to integrate environmental care values into learning. This study aimed to analyze the needs for animated video learning media based on environmentally conscious characters in Pancasila Education. A mixed-methods approach was applied, combining quantitative and qualitative data through observations, interviews, and questionnaires with eighth-grade students and teachers. The analysis focused on pedagogical, technical, cognitive, aesthetic, and evaluative aspects to identify the requirements for effective media development. The findings revealed a strong demand for innovative media that integrates environmental values. Students expressed high interest in learning through animated visual content, which they perceived as engaging and easier to understand. Teachers highlighted the relevance of such media to support character education and facilitate abstract Pancasila concepts. The needs analysis thus provides a comprehensive foundation for designing and developing animated video learning media in subsequent research stages. In conclusion, this study indicates the necessity of animated video media that embodies environmental care values in Pancasila Education. The results serve as an essential initial step for future research in developing valid, practical, and effective instructional media.



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INTRODUCTION

Education plays a vital role in developing intelligent, skilled, and character driven human resources (Chotimah et al., 2021). Pancasila Education, as a foundation of character education in Indonesia, contributes significantly to shaping students sense of responsibility toward themselves, society, the nation, and the environment (Rukmana et al., 2023). It not only instills national values but also fosters students critical thinking skills regarding civic and national issues (Chotimah et al., 2021). Through this subject, students are introduced to values such as cooperation, justice, unity, and social care. However, in the current era of globalization, the internalization of these values faces various challenges (Ruwaitdah et al., 2024).

One of the strategic roles of Pancasila Education in addressing these global challenges is raising students environmental awareness and social responsibility as part of civic life (Gumilar et al., 2024). Character education that instills environmental awareness plays a crucial role in shaping students who can make decisions while considering their impact on nature. Given the deteriorating condition of the Earth amid increasing human demand for environmental resources, a sense of environmental responsibility has become increasingly urgent to develop (Yildirim et al., 2025). Therefore, environmental issues are critical matters that require serious attention and action (Sundari et al., 2023).

In line with the research conducted by Oktamarina (2021) in her study titled 'Enhancing Environmental Awareness from an Early Age Through Green School Activities at Uswatun Hasanah Early Childhood Education Centre in Palembang', character development should begin during the early stages of development. One of the core values that should be instilled from an early age is an awareness of the importance of preserving the environment.

The development of a caring attitude toward the environment should begin at an early age, as positive habits in maintaining environmental cleanliness will serve as a strong foundation for children as they grow into adulthood or progress to the next level of education (Nurrohmah, 2022). However, based on observations conducted by researchers from October 14 to 19, 2024, at SMPN 7 Bayung Lencir, it was found that students' environmental awareness remains low, as evidenced by students littering, with food waste and plastic scattered around the classroom. This behavior stems from the low level of environmental awareness among students (Qodriyanti et al., 2022).

Environmental character education aims to cultivate concern for environmental conditions, instill a sense of responsibility and care, and encourage students to become role models in environmental conservation efforts in their daily lives (Bella Aprillianti et al., 2022). Instilling environmental awareness in children is challenging, as conventional textbooks often lack engagement. Education is crucial for developing individual competence and independence, prompting the government to improve its quality and promote innovation to address issues in Indonesia's education system (Masykuroh & Anggrainy, 2024).

In the globalization era, advancements in information and communication technology have brought significant changes to the world of education (Syarifuddin et al., 2024). More innovative learning approaches, such as the use of animations and other interactive media, can enhance the quality of students' learning experiences (Melati et al., 2023). Using technology can help students to communicate, practice life skills and get better understanding concepts (Sumarni & L. Fitri, 2023).

Therefore, researchers believe it is necessary to innovate to foster an environmentally conscious character through engaging and enjoyable learning media. Learning media plays an important role in education as a tool for teachers to deliver material (Hastuti et al., 2025). Its use enhances the effectiveness and efficiency of learning, facilitates student understanding, and makes complex material easier to comprehend (Sumarni et al., 2023). Animation videos can be used as a learning aid, especially for students who want to understand a subject more deeply (Hanifah et al., 2025). As a technology-based learning medium, animated videos have proven effective in improving learning quality. Students become more capable of mastering concepts and solving problems related to the subject matter (Andrasari, 2022).

Based on these issues, the researcher will contribute a solution by developing one type of media that leverages advanced technology, namely animated video media. In Pancasila Education learning, the use of animated videos featuring characters who show concern for the environment can help students more easily understand the connection between Pancasila values and real life actions to protect the environment (Gustanti & Nainggolan, 2025).

The first stage taken in the process of developing animated video learning media based on environmental care characters begins with conducting a needs analysis. Needs analysis is the process of identifying and collecting information about the things needed by students and teachers to achieve learning objectives and improve the effectiveness and success of the learning process (Harahap & Albina, 2025). The results of observations, interviews, and questionnaires to students and teachers indicate an urgent need for the development of animated video learning media based on environmental care characters.

Based on the results of interviews with teachers of Pancasila Education class VIII SMPN 7 Bayung Lencir found that students are more interested if the teacher uses animated video media in learning, and the fact that there is still a low awareness of environmental care owned by students makes researchers interested in developing animated video learning media based on environmental care character that is not only innovative, but relevant to everyday life that reflects the character of environmental care. Thus the purpose of this research is to analyze the needs of students and teachers towards the development of animated video learning media based on the character of environmental care in the subject of Pancasila education in junior high school.

RESEARCH METHODS

This research is categorized as development research (Research and Development or R&D). The research approach used is qualitative and quantitative. The population of this study were VIII grade students of SMPN 7 Bayung Lencir consisting of 87 students while there were 8 teachers. The study employed qualitative techniques (observation and interviews) to explore students' and teachers' perspectives, and quantitative techniques (questionnaires) to measure the level of need for animated video learning media. The questionnaire distribution in the form of Google Form consists of 20 statement items. The data analysis used qualitative and quantitative approaches. Qualitative data from observations and interviews were analyzed descriptively to identify patterns, while quantitative data from questionnaires were analyzed using descriptive statistics.

The instrument used in this research is a questionnaire (closed questionnaire) developed based on the dimensions of needs in the development of learning media (Korompis et al., 2023). The grids for analyzing students needs and the grids for analyzing teachers needs are described in the following table.

Table 1. The Grid for Analyzing Student Needs

No	Aspect	Indicator	Question Number
I	Pedagogical	a. Learning Style	1,2
		b. Learning Process	3,4
II	Technical	a. Accessibility	5,6
		b. Skills	7,8
III	Cognitive	a. Ability to absorb information	9,10
		b. Understanding of material	11,12
IV	Aesthetics	a. Preferences	13,14
		b. Visual appearance and aesthetics	15,16
V	Evaluation	a. Measurement of level of understanding	17,18
		b. Feedback	19,20

Source: Modification (Raharjo & Safitri, 2024)

Table 2. The Grid for Analyzing Teacher Needs

No	Aspect	Indicator	Question Number
I	Pedagogical	a. Training	1,2
		b. Teaching Method	3,4
II	Technical	a. Infrastructure	5,6
		b. Affordability	7,8
III	Cognitive	a. Ability	9,10
		b. Understanding	11,12
IV	Aesthetics	a. Design	13,14
		b. Suitability	15,16
V	Evaluation	a. Internal Evaluation Tools	17,18
		b. Reports and Data	19,20

Source: Modification (Raharjo & Safitri, 2024)

The data obtained will be analyzed using a quantitative approach technique. With this approach, the results of the analysis can illustrate the extent to which students and teachers need animated video learning media, and show which aspects need to be prioritized in further development.

RESULTS AND DISCUSSION

Student Needs Analysis

This section presents the key findings from the analysis of students needs for character based animated video learning media for environmental awareness in the subject of Pancasila Education. The data analysed came from a questionnaire distributed to 87 students in class VIII of SMP Negeri 7 Bayung Lencir. The analysis focuses on five main dimensions: pedagogical, technical, cognitive, aesthetic, and evaluation with the aim of providing a comprehensive picture of students preferences and expectations for effective and engaging learning media. The findings will serve as an important foundation in the design and development of learning media that are relevant and appropriate to students needs.

Tabel 3. Student Needs Analysis Questionnaire

No	Aspect	Question	Score		Percentage	
			Obtained	Maximum	Obtained (%)	Maximum (%)
1	Pedagogical	Q1	75	87	86,20	100
		Q2	80	87	91,95	100
		Q3	71	87	81,60	100
		Q4	75	87	86,20	100
2	Technical	Q5	71	87	81,60	100
		Q6	63	87	72,41	100
		Q7	69	87	79,31	100
		Q8	54	87	62,06	100
3	Cognitive	Q9	66	87	75,86	100
		Q10	66	87	75,86	100
		Q11	70	87	80,45	100
		Q12	69	87	79,31	100
4	Aesthetics	Q13	58	87	66,66	100
		Q14	78	87	89,65	100
		Q15	73	87	83,90	100
		Q16	80	87	91,95	100
5	Evaluation	Q17	73	87	83,90	100
		Q18	76	87	87,35	100
		Q19	73	87	83,90	100
		Q20	79	87	90,80	100
Average Value					81,54	100

Source: Primary data managed by researchers (2025)

Based on data from the pedagogical aspect, the results of the questionnaire show that the majority of students find it easier to understand information when presented audiovisually with a fairly high average value. As many as 86.20% of students stated that it was easier to understand the material when using audiovisual media. In fact, 91.95% of students found it easier to understand the material presented in the form of animated videos, which indicates that animated videos are effective as learning media. In addition, 81.60% of students felt that learning using animated videos was more fun, so it could increase their interest in learning. 86.20% also agreed that the animated video suits their learning style and makes the learning process more effective.

On the technical aspect, the questionnaire results show that most students have adequate devices to access the learning videos (81.60%). However, internet access is an obstacle for some students, as evidenced by the score of 72.41% which is lower than other questions. Students' readiness to operate the devices is quite good, with 79.31% of students claiming to know how to use their cell phones to watch learning videos. However, the ability to run basic video functions independently (play, pause, repeat) is still lacking, with the lowest score of 62.06%, indicating the need for further training or mentoring in this aspect.

In terms of cognitive aspects, students tend to feel that information presented visually and audibly at the same time helps them understand the material more quickly and easily, with scores of 75.86% respectively. Understanding of difficult material is also better when presented through animated videos, which scored 80.45%. Additionally, 79.31% of students consider learning through animated videos to be more effective than just reading text or viewing static images. This confirms that animated videos can enhance the effectiveness of the learning process and help students overcome conceptual difficulties.

Aesthetic aspects received special attention, with 66.66% of students preferring educational videos that are colorful and have engaging animations, although this score is relatively lower compared to other aspects. However, the color scheme and design in videos significantly influence students' interest in learning (89.65%). Visually appealing content also helps 83.90% of students focus more on the material. Learning motivation increases significantly with visually appealing videos, achieving the highest score of 91.95%. This indicates that the aesthetic aspects of videos are crucial in enhancing students' attention and enthusiasm for learning.

The evaluation aspect shows that students need question and test features to measure their understanding, with a score of 83.90%. Evaluation questions in videos also help students identify parts

of the material they have not understood, supported by a score of 87.35%. Students feel assisted when receiving feedback on their answers (83.90%), and this feedback is highly effective in correcting misunderstandings, with the highest score in this aspect being 90.80%. This indicates that evaluation and feedback are essential components of animated video learning media to ensure the effectiveness of learning.

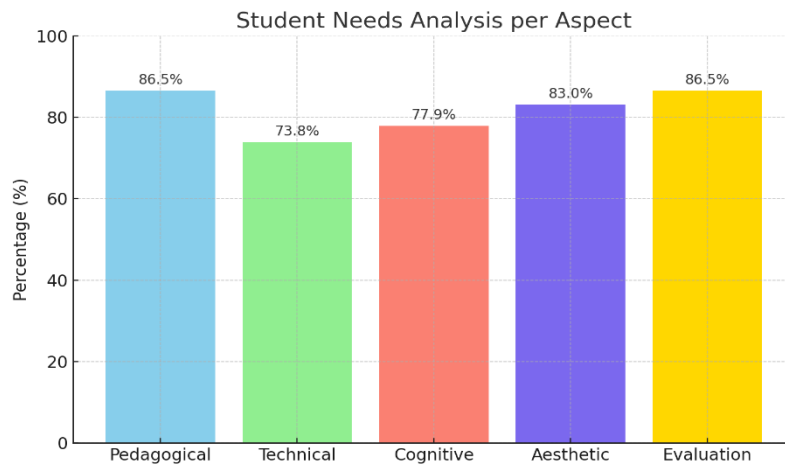


Figure 1. Overall Percentage Diagram of Student Needs Analysis Questionnaire Result

The bar chart shows the results of the analysis of students' needs for animated video-based learning media, covering five main aspects: pedagogical, technical, cognitive, aesthetic, and evaluation. The pedagogical and evaluation aspects ranked highest with a score of 86.5%, indicating that students felt significant benefits in terms of understanding the material and the need for evaluation. The aesthetic and cognitive aspects also show relatively high scores, at 83.0% and 77.9%, respectively, reflecting the importance of visual appeal and the effectiveness of the media in helping students grasp concepts. However, the technical aspect remains a challenge with the lowest score of 73.8%, indicating that access to devices and operational skills still need improvement. Therefore, to maximize the application of animated video media, support in the form of technical training and in-depth, aesthetic, and interactive content design is required.

Based on the results of the analysis of the pedagogical aspects of students, it shows that the majority of students feel the benefits of animated video-based learning media in helping the learning process. The pedagogical aspect gets the highest score of 86.5%, this shows that animated video media is very effective in supporting the student learning process. Most students find it easier to understand the material if it is presented in audiovisual form, because this method suits their learning style. In addition, learning becomes more fun and interactive, thus increasing interest and motivation (Dewayanti et al., 2023). These results emphasize that animated videos not only serve as visual aids but also strengthen the pedagogical basis of teaching and learning activities (Kadek et al., 2024).

The technical aspect scored 73.8%, which is the lowest score in the diagram, indicating a significant obstacle in the implementation of animated video media. Although most students have adequate devices, barriers such as limited internet access and lack of skills in operating basic video features are still frequently encountered. This highlights the need for guidance or training to ensure students are technically ready to access video-based learning media. This aspect is very important so that it does not become an obstacle in the optimal utilization of the media (Burhayani et al., 2023).

The cognitive aspect scored 77.9%, indicating that the animated video media is quite effective in supporting the understanding of learning concepts. The combination of visual and audio elements helps students understand the material more quickly and clearly, especially for difficult topics. Students also felt that learning through videos was more efficient than reading text or viewing static images (Burhayani et al., 2023). These results confirm that animated videos can be a learning alternative that can improve the quality of students cognitive understanding (Putu et al., 2024).

With a score of 83.0%, the aesthetic aspect shows that the visual appearance in the learning video has an important role in attracting students attention. Bright colors, interesting animations, and aesthetic visual design can increase learning focus and motivation. Although not as high as the pedagogical and evaluation aspects, the aesthetic aspect is still an important element that determines the success of learning media (Hanifah et al., 2025). Visually pleasing videos are proven to create a more comfortable and interesting learning atmosphere (Zahra et al., 2025).

The evaluation aspect scored 86.5%, which is as high as the pedagogical aspect. This shows that students are in dire need of evaluation features in learning videos, such as practice questions and feedback. Such features not only help students gauge their understanding, but also provide opportunities to correct mistakes and reinforce concepts that have not been mastered. This aspect is very important in creating reflective and sustainable learning, where students can learn and evaluate themselves independently (Hanifah et al., 2025).

Table 4. Student Responses On The Need For Video Animated Learning Media

No	Aspects	Percentage	Category
1	Pedagogical	86,48%	Very High Need
2	Technical	73,84%	High Need
3	Cognitive	77,87%	High Need
4	Aesthetics	83,04%	High Need
5	Evaluation	86,48%	Very High Need
Average		78,73	High Need

Source: Primary data managed by researchers (2025)

Based on the results of the needs analysis of animated video media based on environmental care character in pancasila education, it can be concluded that all assessed aspects, pedagogical, technical, cognitive, aesthetic, and evaluation are categorized as “high need”. The pedagogical and evaluation aspects received the highest percentage, both at 86.48%, indicating that students strongly require learning media that support their understanding of the material and provide adequate evaluative features. The aesthetic aspect scored 83.04%, reflecting the importance of engaging visuals and animations in capturing student attention and enhancing learning motivation. The cognitive aspect, with a score of 77.87%, shows that animated video media are quite effective in supporting information processing and understanding of complex concepts. Meanwhile, the technical aspect, though the lowest at 73.84%, still falls under the high need category, suggesting the necessity of improving students’ access to devices and technical skills. With an overall average of 78.73%, it can be concluded that animated video media are highly relevant and necessary to develop as an effective and engaging learning support tool.

This finding also reveals a research gap when compared to previous studies. Earlier research on learning media Melisa & Fadlan (2023) has often focused on general content delivery or the technical aspects of media without thoroughly addressing students’ multidimensional needs across pedagogical, cognitive, aesthetic, technical, and evaluative domains. Furthermore, there is a lack of studies that specifically assess student needs for animation-based learning media which incorporate environmental care character values, especially within the context of Pancasila Education at the junior high school level. By addressing this gap, the current study contributes uniquely to the field by providing evidence-based insights into how animated video media can be designed to meet students’ comprehensive needs, while simultaneously supporting character education in the digital learning era.

Teachers need analysis

The analysis of teachers’ needs for animated video learning media in Pancasila Education involved 8 teachers from different junior high schools. It focused on five dimensions: pedagogical, technical, cognitive, aesthetic, and evaluation. The findings show that teachers need media that can contextualize Pancasila values with real-life environmental issues to enhance student engagement and understanding. Pedagogically, existing materials are considered insufficient to foster environmental

character effectively. Technically, teachers prefer user-friendly media compatible with school devices. Cognitively, they highlight the potential of animated videos to simplify abstract concepts. Aesthetically, there is a strong demand for visually appealing and motivating content. For evaluation, teachers expect features to assess students' comprehension and attitudes. These insights highlight a gap in current learning resources, which are mostly text-based and lack interactivity. The findings serve as a foundation for developing animated video media that addresses these needs and supports meaningful, contextualized learning in Pancasila Education.

Table 5. Results of Teacher Needs Analysis

No	Aspect	Question	Score		Percentage	
			Obtained	Maximum	Obtained (%)	Maximum (%)
1	Pedagogical	Q1	8	8	100	100
		Q2	3	8	37,5	100
		Q3	4	8	50	100
		Q4	8	8	100	100
2	Technical	Q5	6	8	75	100
		Q6	7	8	87,5	100
		Q7	4	8	50	100
		Q8	5	8	62,5	100
3	Cognitive	Q9	6	8	75	100
		Q10	8	8	100	100
		Q11	7	8	87,5	100
		Q12	5	8	62,5	100
4	Aesthetics	Q13	4	8	50	100
		Q14	8	8	100	100
		Q15	8	8	100	100
		Q16	7	8	87,5	100
5	Evaluation	Q17	8	8	100	100
		Q18	7	8	87,5	100
		Q19	7	8	87,5	100
		Q20	8	8	100	100
Average Value					83	100

Source: Primary data managed by researchers (2025)

In terms of pedagogical aspects, all teachers (100%) have attended training related to digital-based learning media. However, only 37.5% of them felt that the training was enough to support the optimal use of animated video media. The use of animated video media in learning is still evenly distributed, at around 50%, which indicates that the implementation of this media has not run optimally in the field. However, all teachers (100%) agreed that video animation can facilitate student understanding, indicating a positive perception of the effectiveness of this learning media in improving the quality of the teaching and learning process.

In the technical aspect, most schools have provided adequate supporting facilities, with 75% of schools having facilities that support the learning process. In addition, the majority of teachers (87.5%) stated that the computer or laptop devices available at school are quite supportive for playing animated videos as learning media. However, there are still obstacles in terms of access to animated video media, where only 50% of teachers have access to it. In addition, internet access at school is also an obstacle for some teachers, with only 62.5% claiming to have an adequate internet connection to support the use of animated video-based learning media.

In the cognitive aspect, most of the teachers, 75%, felt capable of using animated video media in the learning process. Nevertheless, all respondents or 100% of the teachers involved in this study admitted that they still needed additional guidance in order to optimize the use of the media. In addition, 87.5% of teachers stated that the delivery of material became easier with the animated video media, and 62.5% of teachers also understood how to integrate this media effectively in learning. This shows that although the basic ability to use the media is quite good, support and assistance are still needed to improve the effectiveness of animation media-based learning.

In terms of aesthetics aspect of the animated media in learning shows mixed results. As many as 50% of the teachers considered the design of the animated media to be attractive, although only half

of them gave a positive assessment of the aesthetics. However, all teachers or 100% agree that the animated media is very suitable for learning needs. In addition, 100% of teachers also assessed that the visual and audio elements contained in the media were able to support concept understanding effectively. No less important, 87.5% of teachers stated that this animation media was easy to use, thus facilitating the learning process in the classroom. Thus, although there are differences in perceptions related to aesthetic appeal, this animated media is still considered functional and relevant in supporting learning.

Finally, in the evaluation aspek, all teachers (100%) expressed the need for technology-based evaluation tools in the learning process. In addition, the majority of teachers, 87.5%, want the evaluation tool to be easy to access and use in order to maximize its practical use. As many as 87.5% of teachers also actively record the progress of students' understanding through the evaluation tool. Furthermore, all teachers (100%) utilize evaluation data as the basis for developing learning media, so that evaluation not only functions as a measure of learning outcomes, but also as a tool to improve the quality of media used in the learning process.

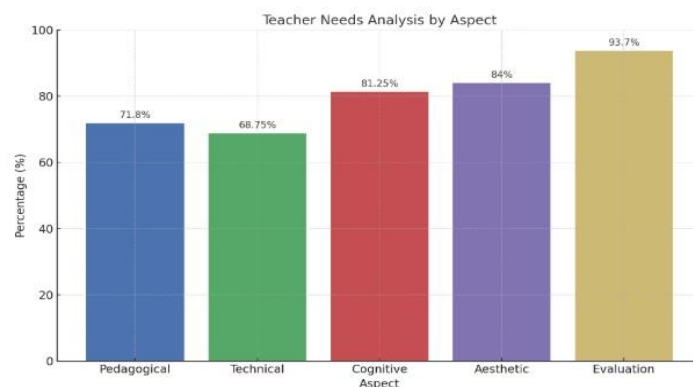


Figure 2. Overall Percentage Diagram of Teacher Needs Analysis Questionnaire Result

The teacher needs analysis diagram shows the results of the teacher needs analysis of various aspects of the learning process, measured in percentage form. There are five aspects analyzed, namely: pedagogical, technical, cognitive, aesthetic, and evaluation. The results show that all aspects have a high level of need, with percentages ranging from 68.75% to 93.7%. The evaluation aspect obtained the highest score (93.7%), indicating that teachers really need tools in the evaluation process. Meanwhile, the technical aspect has the lowest percentage (68.75%), but still reflects a significant need. Overall, this data confirms the importance of providing learning media that support various aspects of teacher professionalism in teaching.

Teachers needs for pedagogical aspects are reflected in the 71.8% figure, which shows that teachers really expect learning media that are able to support structured, effective teaching strategies, and in accordance with the principles of educational learning. Media that supports this aspect is considered important in strengthening the teacher's role as a facilitator in the teaching and learning process. Training teachers in the use of educational technology is essential to support teaching effectiveness (Aulia et al., 2025). However, the analysis shows that the training needs to be followed up with more innovative and contextualised media applications. Further training support for the use of animated media is needed so that teachers can maximise digital media in the character learning process, which is a challenge in today's digital era (Purba et al., 2025).

Although it has the lowest score compared to other aspects, the 68.75% figure still indicates that teachers need learning media that is easy to use, technologically efficient, and does not cause technical problems in its implementation. Ease of access and use of technology is an important factor to ensure a smooth learning process. This suggests that infrastructure and affordability are supporting factors in the development and implementation of technology-based learning media (Tumiran et al., 2024). The theory of educational infrastructure also supports the view that the existence of appropriate facilities is a prerequisite for the effectiveness of ICT-based learning (Inderawati et al., 2024).

With a percentage of 81.25%, the cognitive aspect is one of the main concerns of teachers. This shows that teachers really need media that can stimulate students' critical, logical, and analytical thinking processes. Media that support cognitive aspects are considered capable of improving concept understanding, deepening the material, and strengthening the knowledge internalization process (Hanifah et al., 2025). Interpretation of this data indicates that visual-based media is considered to strengthen understanding of complex concepts and can stimulate students cognitive development (Faradina et al., 2025). Further analysis revealed that animated media strongly supports contextual learning, thus helping students in building connections between environmental concepts and Pancasila values taught in the classroom. This is in line with the Cognitive Theory of Multimedia Learning, which states that the combination of words and images can help the learning process (Rahayu et al., 2023).

The score of 84% on the aesthetic aspect reflects the importance of visual appearance and attractive graphic design in a learning media. Teachers realize that aesthetically pleasing media not only adds visual appeal, but can also increase students' learning motivation and create a more fun and interactive learning atmosphere. The interpretation of these results shows that visual aesthetics and content suitability are important factors in the effectiveness of learning media (Rukmana et al., 2023). The analysis shows that teachers recognise that attractive design and content can increase students' attention and motivation to learn, especially in themes related to the environment. Instructional design principles and aesthetic theories in learning emphasise the importance of aesthetic elements in creating a more enjoyable learning experience (Inderawati et al., 2024).

The evaluation aspect obtained the highest score of 93.7%, which confirms that teachers really need learning media that is able to support the process of assessing student learning outcomes practically and accurately. Evaluative features such as practice questions and feedback systems are needed to measure competency achievement and provide targeted learning interventions. The interpretation of these results implies that teachers not only see digital media as teaching aids, but also as instruments that can assess the performance of the learning process (Aisyah et al., 2025). A more detailed analysis shows that the media's ability to provide systematically documented learning data adds value to its evaluative role, especially since learning today should ideally be based on accurate data. Thus, a data-driven approach to learning is highly relevant and effective in assessing student progress and learning outcomes (Hariyati & Nurhafizah, 2023).

Table 6. Teacher Responses on the Need for Video Animated Learning Media

No	Aspects	Percentage	Category
1	Pedagogical	71,8%	High Need
2	Technical	68,75%	Moderate Need
3	Cognitive	81,25%	High Need
4	Aesthetics	84%	High Need
5	Evaluation	93,7%	Very High Need
Average		79,9%	High Need

Source: Primary data managed by researchers (2025)

Based on the results of the teacher needs analysis of the five aspects of learning, it is found that all aspects show a high level of need, with a percentage range between 68.75% to 93.7%. The evaluation aspect occupies the highest position with 93.7%, indicating that teachers really need media that can facilitate the process of assessing learning outcomes efficiently and on target. Furthermore, the aesthetic aspect (84%) and cognitive aspect (81.25%) also show high numbers, indicating the importance of learning media that are visually appealing and able to stimulate student thinking. Meanwhile, the pedagogical (71.8%) and technical aspects (68.75%) still show significant needs, especially in supporting teaching strategies and ease of use of the media. These findings suggest that in developing learning media, it is very important to pay attention to the balance between functionality, aesthetics,

technical ease, and evaluative effectiveness, so that the resulting media is truly relevant and responsive to the professional needs of teachers in the digital era.

This finding also highlights a research gap when compared to previous studies. Prior research on learning media development Bella Aprillianti et al. (2022) has mostly focused on general aspects such as content delivery and technical usability, with limited attention to the holistic integration of pedagogical, cognitive, aesthetic, technical, and evaluative dimensions. In addition, there is a lack of studies that specifically examine teacher needs for developing animation-based learning media that instill environmental care character within the context of Pancasila Education at the junior high school level. Therefore, this study provides a unique contribution by addressing these multidimensional needs, ensuring that the developed media not only meet technical and content standards but also support character education objectives that are critical in the current era of environmental challenges and digital transformation in education.

CONCLUSION

Based on the results of the analysis of student and teacher needs, animated videos featuring environmentally conscious characters have great potential for use in Pancasila Education lessons. The five main aspects analyzed pedagogical, evaluation, aesthetic, cognitive, and technical show that both students and teachers have a high need for this media. The pedagogical and evaluation aspects rank highest, indicating the media's effectiveness in delivering content and providing learning feedback. Aesthetic and cognitive aspects further enhance student engagement and understanding, while technical aspects present challenges that need to be addressed through infrastructure support and training.

However, to ensure the optimal and sustainable implementation of this media, a comprehensive supporting strategy is required. This includes intensive training for teachers, improved technology access in schools, inclusive and user-friendly media design, and the contextual integration of Pancasila character values and environmental issues. With a collaborative and structured approach, character-based animated media not only serves as a teaching aid but also as a means to strengthen character education and foster environmental awareness among the younger generation.

Through a holistic and collaborative approach between developers, educators, and other education stakeholders, this character-based animated media will not only serve as an effective learning tool but also as a transformative instrument in fostering environmental awareness and strengthening character education in the digital age. The author would like to express his deepest gratitude to all those who have provided support and contributions in the preparation of this article, especially in the process of analysing learning media needs. The authors would like to thank the teachers, students, and colleagues who have been willing to provide meaningful information, suggestions, and input. Hopefully, this article can provide benefits in developing learning media that are more effective and in accordance with learning needs in the field.

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