

Development of Canva-Based Interactive Video to Enhance Environmental Literacy of Elementary School Students

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Abstract: Students' low awareness of environmental conditions and the lack of learning activities that connect concepts with real-world contexts present key challenges in strengthening environmental literacy in elementary schools. This study aims to develop and test the effectiveness of Canva-based interactive videos in supporting students' environmental literacy. The study utilized the ADDIE development model, involving fifth-grade students as the research subjects. Data were collected through tests, questionnaires, observations, and expert validations, and subsequently analyzed using quantitative descriptive techniques. The results indicated that the developed media achieved a valid category (76.44%) and a highly practical category (97.90%). The improvement in environmental literacy was observed in the cognitive aspect with an N-Gain score of 0.93 (high category), as well as in the affective (99.00%) and behavioral (100.00%) aspects, both falling into the excellent category. The uniqueness of this research lies in the implementation of the media within a local region facing challenges of environmental degradation and low ecological awareness, making the integration of local contexts a key factor in enhancing meaningful learning. Thus, contextually designed Canva-based interactive videos are proven effective in supporting the enhancement of environmental literacy among elementary school students.

Keywords: Canva; Elementary school; Environmental literacy; Interactive video

Introduction

Global developments in the 21st century increasingly showcase the intensification and complexity of environmental issues, such as climate change, pollution, and unsustainable exploitation of natural resources (Nyika & Mwema, 2021). This phenomenon emphasizes the urgency of systematic efforts to build public ecological awareness through formal education pathways (Hajj-Hassan et al., 2024). Environmental literacy has become an essential competence that individuals must possess to comprehend the interconnectedness between human activities and ecosystem sustainability, as well as to make responsible environmental decisions (Edsall & Broich, 2020). In this regard, elementary education holds a strategic position as the initial foundation for instilling knowledge, attitudes, and skills oriented toward environmental conservation (Llopiz-Guerra et al., 2024).

The implementation of environmental literacy learning in elementary schools remains dominated by teacher-centered approaches and is oriented toward conceptual material delivery (Ardoin et al., 2020). Furthermore, field research shows that the internalization of environmental care values at the elementary school level is often not holistically integrated into daily learning processes, remaining confined to fulfilling normative curriculum materials (Husin et al., 2020). This condition leads to low active student participation and limitations in constructing connections between environmental concepts and everyday realities (Stevenson et al., 2019). Consequently, students' environmental literacy has not developed optimally, as demonstrated by low contextual understanding, poor reflective skills, and limited interest and concern regarding environmental problems (Panjaitan et al., 2021). This condition is consistent with the identified imbalance in the components of environmental literacy at the elementary

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school level, where conceptual knowledge remains disproportionately emphasized compared with the development of environmental attitudes, values, and pro-environmental behaviors (Suratmi et al., 2024). This indicates that abstract learning has not been able to meet the learning needs of elementary school students, who tend to require concrete and interactive learning experiences. Therefore, instructional innovations capable of accommodating these characteristics are urgently needed (Wijaya et al., 2025).

The development of digital technology provides opportunities to present more interactive and student-centered learning (Baroroh et al., 2024). Interactive video, as a form of instructional multimedia, can integrate visual elements, audio, and interactivity that can actively enhance student attention and participation (Deng et al., 2025; Haerawan et al., 2024). The utilization of the Canva platform as a digital design application offers simplicity in developing interactive videos that are not only visually appealing but also flexible enough to be adapted to instructional needs (Priyambodo et al., 2025; Spatioti et al., 2022). Accordingly, the use of Canva-based interactive videos has the potential to become an alternative solution for improving the quality of environmental literacy learning in elementary schools. Local context is a crucial dimension in strengthening environmental literacy because it relates directly to students' real-world experiences. This research was conducted at SDN Sumber Agung, Keluang District, Musi Banyuasin Regency, which is a region characterized by a natural resource-based economy, particularly the palm oil plantation and petroleum sectors (Yuslaini et al., 2023). These activities carry implications for environmental dynamics, such as land-use changes, potential pollution, and pressure on ecosystem balance.

Moreover, various reports highlight irresponsible resource exploitation practices, such as illegal oil management activities that provide short-term profits but cause environmental damage and social losses for local communities (Nurfatriani et al., 2022). This situation shows that unsustainable utilization of natural resources can lead to significant ecological and social consequences (Liu et al., 2022). Such conditions place environmental literacy as a contextual and urgent need for students, enabling them to understand the relationship between economic activities and their environmental impacts from an early age (Guerrero & Sjöström, 2025). Developing learning media that integrates local context is considered vital to increase learning meaningfulness. Canva-based interactive videos enable the presentation of materials that connect environmental concepts with phenomena close to students' lives, thereby fostering a more concrete and applicable understanding (Ekowati et al., 2024; Guerrero

& Sjöström, 2025). In addition, the integration of the local environmental context of South Sumatra into audiovisual media has been shown to effectively enhance students' learning engagement and foster elementary school students' authentic understanding of the environmental potential and issues within their surrounding communities (Suratmi et al., 2019). Furthermore, the utilization of the Canva platform has proven effective and flexible when used to package instructional visuals integrated with local content or culture in the South Sumatra region (Nurlina et al., 2024). However, prior studies have tended to focus on the use of interactive media in general without integrating local contexts as authentic learning sources. Additionally, studies specifically combining Canva utilization with the reinforcement of environmental literacy at the elementary school level remain highly limited (Ilahy et al., 2025). This condition indicates a research gap in the development of learning media that is not only interactive but also contextual and relevant to students' ecological realities.

Based on the aforementioned rationale, this study aims to develop Canva-based interactive videos as learning media to strengthen the environmental literacy of elementary school students at SDN Sumber Agung. The novelty of this research lies not only in the integration between the development of Canva-based interactive video media and the local context of a natural resource-based area, but also in the effort to construct learning that directly links environmental literacy with the ecological realities faced by students. The focus of the study encompasses the media development process, product feasibility analysis, and its potential effectiveness in enhancing students' environmental literacy.

Method

This study employed a Research and Development (R&D) approach aimed at developing Canva-based interactive videos and testing their feasibility, practicality, and effectiveness in strengthening elementary school students' environmental literacy. The development model used was ADDIE (Analysis, Design, Development, Implementation, Evaluation) because it provides a systematic and iterative framework for developing learning media based on user needs. The research was conducted at SDN Sumber Agung, Keluang District, Musi Banyuasin Regency. The research subjects consisted of 30 fifth-grade students selected through purposive sampling, considering the alignment of environmental literacy materials with the students' cognitive development characteristics. This study also involved three expert validators consisting of material,

media, and language experts to assess product feasibility. The measurement of environmental literacy in this study was developed multidimensionally, covering cognitive, affective, and behavioral aspects, and was contextually designed by linking learning materials to local environmental conditions in the Musi Banyuasin region.

Cognitive Aspect (Environmental Knowledge)

The cognitive aspect was measured using a 10-item multiple-choice test administered as a pretest and posttest. This instrument was adapted from previous research developed by Diana Kusumaningrum and Adzimatur Muslihasari, then adjusted to the local environmental context, such as palm oil plantation activities and natural resource management in the research area. The adaptation considered material relevance, item difficulty levels, and student characteristics.

Affective Aspect (Environmental Attitude)

The affective aspect was measured using a Likert-scale questionnaire consisting of 10 statements reflecting indicators of environmental concern, environmental awareness, and attitudes toward environmental issues. The statements were framed in contextual situations related to students' daily lives to capture their attitudes more authentically.

Behavioral Aspect (Environmental Behavior)

The behavioral aspect was measured using a combination of a Likert-scale questionnaire (10 statements) and direct observation. Observations were conducted for one week using a structured observation sheet with a 1–5 rating scale to record students' actual behavior in protecting the environment, such as waste disposal habits, cleanliness maintenance, and participation in environmental activities. All instruments were validated through expert judgment by material experts to ensure content appropriateness, clarity of indicators, and relevance to the research context. Thus, the instruments were declared feasible for use without conducting statistical reliability retesting.

Effectiveness Test Design

The media effectiveness test employed a one-group pretest-posttest design to measure the improvement in the cognitive aspect. Meanwhile, the affective and behavioral aspects were measured longitudinally to capture shifts in student attitudes and habits more comprehensively.

Research Procedures

The research was executed through the stages of the ADDIE model as follows: Analysis: Identifying learning

needs, student characteristics, and environmental literacy problems through observations and interviews; Design: Preparing the lesson plan, storyboard, and materials based on the local environmental context. Development: Developing the Canva-based interactive video and conducting expert validation; Implementation: Implementing the media with students through a pretest, media usage, and a posttest; Evaluation: Conducting formative and summative evaluations of the media's feasibility and effectiveness.

Data Collection Techniques

Data in this study were gathered using various methods. The data collection matrix can be seen in Table 1.

Table 1. Research data collection instrument matrix

Instrument	Method	Type of Data
Observation	Observation	Student activity and engagement
Interview guide	Interview	Learning needs
Questionnaire	Questionnaire	Responses and media practicality
Validation sheet	Expert validation	Media feasibility (material, language, layout)
Test	Test	Students' environmental literacy

Based on the table, the obtained data were subsequently analyzed using techniques tailored to the type and purpose of measurement in this study.

Data Analysis Techniques

Data analysis techniques in this study were carried out by integrating qualitative and quantitative approaches according to the characteristics of the data obtained. Qualitative analysis served as the basis for the media development process, while quantitative analysis was used to evaluate the feasibility, practicality, and effectiveness of the media in enhancing students' environmental literacy.

Qualitative Data Analysis

Qualitative data were obtained through observations and interviews aimed at identifying the needs of students and educators regarding environmental literacy learning. Data analysis was carried out through the stages of data reduction, data display, and conclusion drawing. The results of this analysis were used as a foundation for designing and developing the learning media to match student characteristics, the local context, and the instructional issues faced.

Quantitative Data Analysis

Quantitative data analysis was performed on the data from expert validation, student response questionnaires, and environmental literacy tests covering cognitive, affective, and behavioral aspects. Data obtained through Likert-scale instruments were analyzed by converting scores into percentages to facilitate data interpretation.

Score conversion was performed using the following formula:

$$P = \frac{\sum X}{\sum X_{\max}} \times 100\% \quad (1)$$

Description:

$\sum X$ = sum of obtained scores

$\sum X_{\max}$ = maximum possible score

The percentage calculation results were then interpreted according to the categories established for each measurement aspect.

Media Feasibility and Practicality Analysis

Data from expert validation and student responses regarding media usage were analyzed as percentages based on the converted Likert-scale scores. The level of media feasibility and practicality was then interpreted using the criteria in Table 2.

Table 2. Media feasibility and practicality criteria

Percentage (%)	Feasibility Category	Practicality Category
81–100	Highly Feasible	Highly Practical
61–80	Feasible	Practical
41–60	Moderately Feasible	Moderately Practical
21–40	Less Feasible	Less Practical
≤ 20	Infeasible	Impractical

Media Effectiveness Analysis (Environmental Literacy)

Media effectiveness was measured based on the improvement of students' environmental literacy, which included cognitive, affective, and behavioral aspects.

Cognitive Aspect

The improvement in learning outcomes was analyzed using the N-Gain formula:

$$g = \frac{S_{\text{post}} - S_{\text{pre}}}{S_{\text{max}} - S_{\text{pre}}} \quad (2)$$

The interpretation of N-Gain values is presented in Table 3.

Table 3. N-Gain criteria

N-Gain Value	Category
$g > 0.7$	High
$0.3 < g \leq 0.7$	Medium
$g \leq 0.3$	Low

Affective and Behavioral Aspects

Data for the affective and behavioral aspects were analyzed in percentages based on the converted Likert-scale scores. The interpretation of the environmental literacy level was conducted based on the criteria in Table 4.

Table 4. Environmental literacy criteria (affective and behavioral)

Percentage (%)	Category
81–100	Excellent
61–80	Good
41–60	Fair
21–40	Poor
≤ 20	Very Poor

To clarify the measurement of affective and behavioral aspects, an environmental literacy indicator blueprint was utilized, as presented in Table 5.

Table 5. Environmental literacy blueprint (affective and behavioral)

Aspect	Indicator	Description
Affective (Attitude)	Environmental concern	Showing attention to environmental conditions
	Environmental awareness	Realizing the importance of protecting the environment
	Attitude toward environmental issues	Displaying positive attitudes toward conservation efforts
Behavior	Environmental protection actions	Performing real actions such as proper waste disposal
	Participation	Getting involved in environmental preservation activities
	Eco-friendly habits	Practicing energy-saving behaviors and maintaining cleanliness

Result and Discussion

Needs Analysis

Initial analysis results indicated that the level of student awareness regarding surrounding environmental conditions was still relatively low. Based on the questionnaire results, only about 48% of students could identify environmental issues around them, and 45% of students understood the impact of human activities on environmental balance. This finding shows that students' real-life experiences with the environment have not been optimally integrated into learning, creating a need for a more contextual and applicable approach. Environmental literacy learning in fifth grade still tends to be conceptual and fails to link materials with the students' local environmental conditions. The use of learning media is limited to textbooks and

conventional videos, resulting in low student engagement in the learning process. Questionnaire data showed that 70% of students found it easier to understand material through visual and interactive media, and 72% experienced an increase in understanding when material was presented attractively. All students (100%) stated that an engaging visual layout and the presence of feedback in learning helped boost their understanding and confidence.

From the educators' perspective, interview results showed that the utilization of interactive media in learning remained limited due to constraints in facilities, internet access, and media development skills. This finding was reinforced by data showing that only 56% of students had adequate access to devices and the internet, indicating that the developed media must consider flexibility and accessibility. Observation results also indicated that environmental material had not been presented contextually, particularly in explaining the link between human activities and their environmental impacts. Overall, these findings confirm a gap between learning needs and existing practices, making the development of Canva-based interactive videos highly relevant as a solution to directly support contextually rich and effective environmental literacy enhancement for students.

Design Stage

The design stage was carried out based on the needs analysis results to generate a media design capable of addressing the limitations of environmental literacy learning in elementary schools. The design focused on developing a Canva-based interactive video that not only presented material visually but also integrated the students' surrounding environmental context to reinforce the connection between concepts and real experiences. The material was designed by emphasizing the concept of ecosystem balance and the impact of human activities on the environment, organized systematically starting from concept introduction, presentation of contextual phenomena, to reinforcement through reflective activities. The media design included drafting a storyboard that detailed the presentation flow, the integration of visual elements, and the development of interactive features such as quizzes and immediate feedback. The design also accounted for readability, simplicity of language, and clarity of instructions to suit the characteristics of elementary school students. The presence of interactive features was designed to encourage active student participation, not merely as visual accessories. As shown in Figure 1, the developed storyboard illustrates the systematic presentation flow of the video as a baseline for the media development process.

Development Stage

The development stage is the process of realizing the design into a product in the form of a structured, contextual, and interactive Canva-based video. Media development was conducted by integrating text, images, animations, audio, and visual transitions arranged systematically to support step-by-step student understanding. The developed media explicitly linked ecosystem material to the students' surrounding environmental conditions, thereby not only conveying concepts but also building awareness of the connection between human activities and their environmental impacts. This approach serves as a key differentiator compared to conventional learning media that tend to be abstract. The video display was designed to be communicative and engaging through a blend of relevant visual elements and gradual material presentation, directly enhancing student engagement and focus in the learning process. One of the media development outcomes is shown in Figure 2.



Figure 1. Storyboard layout media



Figure 2. Interactive video display in the media

The media was also equipped with interactive features consisting of quizzes and immediate feedback designed to reinforce conceptual understanding and encourage active student participation. This feature allows students to not only receive information but also engage in self-evaluation. The implementation of these interactive features is shown in Figure 3.

The developed product was subsequently validated by three experts—namely a media expert, a material expert, and a language expert—to assess the feasibility of content, layout, and language. The validation results indicated that the developed media fell into the feasible to highly feasible categories, with several improvement suggestions focusing on refining language quality, instruction clarity, and visual layout optimization. A summary of the expert validation results is presented in Table 6.

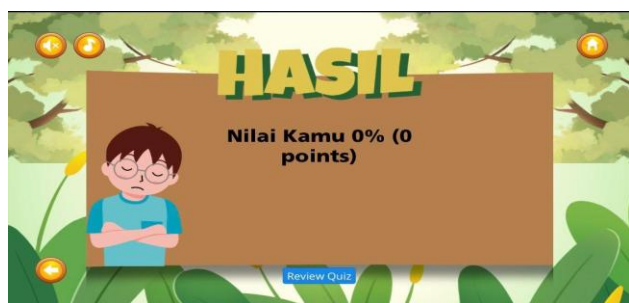


Figure 3. Interactive features within the media

Table 6. Expert validation results on learning media

Validation	Validation Percentage (%)	Category
Media Expert	85.33	Highly Valid
Material Expert	60.00	Fair
Language Expert	84.00	Highly Valid
Average	76.44	Valid

The expert validation results showed that the developed learning media was in the valid category with an average percentage of 76.44%, reflecting its usability while revealing quality dynamics across aspects. The high scores in the media (85.33%) and language (84%) aspects confirmed that the product's primary strength lies in its communicative visual design and language use appropriate for student characteristics, effectively supporting learning engagement. Conversely, the score in the material aspect (60%) indicated room for strengthening the depth and precision of the substance, particularly in integrating environmental literacy concepts more contextually. This discrepancy underlines that the media innovation succeeded in presentation and interactivity but requires conceptual refinement to strike a balance between visual quality and content strength. Overall, these results demonstrate that the media is not only feasible for use but also holds strong potential as a visual-interactive learning solution that directly supports environmental literacy reinforcement after targeted revisions to the material aspect.

Implementation

The learning media, having gone through the validation and revision stages, was subsequently

implemented with 30 fifth-grade students at SDN Sumber Agung. The implementation was carried out in a single session to measure the cognitive aspect through pretest and posttest administration, combined with a one-week observation period to evaluate shifts in students' affective and behavioral aspects. Learning activities were executed using the developed Canva-based interactive video, with an instructional flow involving material presentation, interaction via quiz features, and immediate feedback delivery.

Implementation Results for the Cognitive Aspect

The results of measuring students' cognitive aspects before and after using the media are presented in Table 7.

Table 7. Students' environmental literacy pretest and posttest results

Score Interval	Pretest (n)	Pretest (%)	Posttest (n)	Posttest (%)	Change
81–100	0	0	30	100	+100
61–80	1	3.30%	0	0	-3.30
41–60	8	26.70	0	0	-26.70
21–40	9	30	0	0	-30.00
0–20	12	40	0	0	-40
Total	30	100	30	100	-

The distribution of pretest and posttest results revealed a significant shift in the cognitive aspect of students' environmental literacy. At the baseline stage, the dominance of students in the low-score range (0–40) indicated that understanding of environmental issues was limited and disconnected from real-life contexts, especially in identifying local environmental problems and understanding human impacts on ecosystem balance. Following the implementation of the Canva-based interactive video, all students reached the highest score category (81–100), showing that a more contextual cognitive reinforcement of environmental literacy had occurred. Students did not merely understand concepts theoretically but were able to link materials to surrounding environmental conditions and reason out the connections between human activities and environmental impacts. This finding confirms that the utilization of Canva-based interactive videos is effective in strengthening students' environmental literacy through the presentation of contextual, visual, and interactive materials, making learning more meaningful and applicable. The improvement in student learning outcomes was then analyzed using N-Gain.

Table 8. N-Gain calculation results

Pretest Average	Posttest Average	N-Gain	Category
30	97	0.93	High

The pretest and posttest average values showed a highly significant increase with an N-Gain score of 0.93, falling into the high category. This achievement indicates that the learning process using Canva-based interactive videos successfully optimized the reinforcement of students' cognitive environmental literacy to a maximum degree. The high N-Gain value reflects that student's did not just experience a score increase, but displayed an enhanced capacity to understand environmental concepts deeply and contextually. This confirms that the developed media is effective in driving learning oriented not only toward outcomes but also toward the quality of meaningful understanding.

Implementation Results for the Affective and Behavioral Aspects

Next, the measurement results for students' affective and behavioral aspects over one week of observation are presented in Table 9.

Table 9. Environmental literacy results for affective and behavioral aspects

Aspect	Percentage (%)	Category
Affective	99.00	Excellent
Behavior	100.00	Excellent
Average	99.50	Excellent

The measurement results demonstrated highly significant achievements, with an attitude aspect score of 99% and a behavioral aspect score reaching 100%. Broadly, these data reflect that student not only gained a deep understanding of the urgency of environmental conservation but also began to internalize environmental care behavioral tendencies during the learning process. Based on the one-week observation results, this transformation proved not to happen instantaneously but rather through a gradual process of habit formation. In the initial days, student behavior tended to be inconsistent, and they still needed reminders to maintain cleanliness. However, over time, independent initiative began to surface; students became more responsive to surrounding conditions without needing further direction. This indicates that environmental literacy values had moved beyond the cognitive stage and begun to manifest in actual deeds. Although the questionnaire instrument scores showed near-perfect figures, the interpretation of these results was still treated with caution to anticipate potential social desirability bias (the tendency of students to provide answers deemed correct or expected). In this context, observation results acted as a crucial validation confirming that behavioral changes did indeed take place in the field, even though individual consistency levels still varied. This finding reinforces that the use of

Canva-based interactive videos is effective in building contextual and sustainable environmental awareness and habits.

Student Responses to the Media

As a final validation stage of the research results, measurements were taken regarding student responses to assess the practicality of the interactive video media used. Student responses to the use of the learning media are presented in Table 10.

Table 10. Student response results toward learning media

Aspect	Obtained Score	Max Result Score	(%)	Category
Clarity of Content	35	35	100	Highly Practical
Presentation Technique	134	140	95.70	Highly Practical
Image	67	70	95.70	Highly Practical
Appropriateness Text	68	70	97.10	Highly Practical
Appropriateness Video Alignment	70	70	100	Highly Practical
Audio	70	70	100	Highly Practical
Communicativeness	68	70	97.10	Highly Practical
Average	512	525	97.90	Highly Practical

Based on the data in Table 10, the developed media obtained an average score of 97.9%, classified as highly practical. Perfect scores (100%) in the indicators of clarity of content, video alignment, and audio quality confirm that the media was capable of transmitting environmental education messages effectively without significant technical barriers. This high practicality result linearly supports previous findings regarding the enhancement of student attitude and behavioral aspects. The ease of accessibility and communicative presentation (97.10%) served as important factors facilitating the internalization of environmental values, making them visible in students' actual actions during the learning process. Collectively, these findings show that the developed media is not only easy to use but also capable of supporting active student involvement in understanding and applying environmental literacy concepts more contextually.

Discussion

The research results show that the use of Canva-based interactive videos not only improves student learning outcomes but also shifts how students understand and respond to environmental issues more contextually. This change is visible in the students' ability to begin linking human activities with their impacts on ecosystem balance. This condition indicates that learning no longer stops at information delivery but has driven the formation of more meaningful

understanding. This finding aligns with the constructivist approach, which emphasizes the importance of connecting new knowledge with students' real experiences (Richter et al., 2025; Tsehay et al., 2024). In this study, integrating local environmental conditions into the learning material was proven to strengthen the understanding process. Students did not merely receive concepts but connected them with realities they encounter daily. This result is in line with prior research showing that real context-based learning can significantly enhance student engagement and understanding.

From the cognitive side, the observed improvement can be explained through Mayer's Cognitive Theory of Multimedia Learning. This theory emphasizes that combining visual and verbal elements can optimize information processing through two cognitive channels. This process involves actively selecting, organizing, and integrating information (Mayer, 2024). In practice, students found it easier to comprehend relationships between ecosystem components when material was presented through visuals integrated with audio explanations. This multimodal presentation helps reduce cognitive load and increases processing efficiency within the working memory (Cavanagh & Kiersch, 2023). This finding reinforces previous research results indicating that interactive multimedia media has a significant effect on students' conceptual understanding, particularly in digital technology-based learning. It also aligns with findings that digitally packaged interactive material focusing on environmental issues can stimulate elementary school students' critical thinking skills in organizing scientific information more structurally. In the affective and behavioral aspects, the changes that occurred showed a gradual pattern during the observation process (Oğuz & Pinar, 2025; Dork et al., 2024). At the initial stage, students still required guidance. However, in the following days, independent initiatives to protect the environment began to emerge as a form of value internalization (Schunk & DiBenedetto, 2020). This pattern is consistent with Bandura's social learning theory, which explains that behavior is formed through processes of observation and imitation (Horsburgh & Ippolito, 2018; Minkels et al., 2025). In the context of this study, the interactive video functioned as a behavioral model providing concrete examples to students. Consequently, environmental values were not only understood cognitively but began to be adopted in real actions. This finding is also supported by prior research showing that interactive-visual media can enhance engagement while driving shifts in student learning behavior (Monazam-Tabrizi et al., 2026).

The exceptionally high practicality of the media further reinforced learning effectiveness. Media that is

easy to use tends to increase student acceptance in the learning process (Staneviciene & Žekienė, 2025). From the perspective of the Technology Acceptance Model (TAM), perceived ease of use and clarity of presentation play vital roles in increasing user engagement (Granić & Marangunić, 2019). This high engagement contributes directly to strengthening the learning process. The impact is visible not only in the cognitive aspect but extends to students' attitudes and behaviors, particularly when learning is supported by media designed interactively and contextually. The uniqueness of this study lies in the integration of Canva-based media with the local context as an authentic learning source. This differs from prior research that tended to utilize Canva merely as a visual-interactive medium without a strong link to students' realities. This study explicitly positioned the surrounding environment as a core part of the instructional design. This indicates that previous approaches still carried limitations in bridging the gap between concepts and students' real experiences. This contextualization reinforces the principle that integrating local values and issues into elementary school science materials is proven essential for transforming abstract knowledge into tangible environmental concern.

The findings in this study confirm that media effectiveness is determined not just by interactivity features but by the extent to which the media can deliver a relevant and meaningful context. Thus, integrating the local context becomes a key element that distinguishes and reinforces learning impacts (Ramli et al., 2025; Asmayawati et al., 2024). Nevertheless, the remarkably high achievements in the affective and behavioral aspects need to be interpreted cautiously. The potential for response bias in the questionnaires remains a concern. However, observation results indicated that behavioral changes truly began to emerge, although not yet fully consistent across all students. This indicates that the value internalization process is still in its early stages. Reinforcement over a longer period is still required for these changes to become stable habits. Accordingly, the findings of this study confirm that learning effectiveness is not solely determined by the use of interactive media. A more decisive factor is the media's capacity to connect concepts with students' realities. The main contribution of this research lies in proving that simple media like Canva, when contextually and interactively designed, can produce significant learning impacts (Hidayah et al., 2023; Fikriyyani et al., 2024). This finding simultaneously challenges the assumption that digital learning effectiveness always relies on complex technologies.

Conclusion

This study demonstrates that the development of Canva-based interactive videos integrated with the surrounding environmental context can support the enhancement of environmental literacy among elementary school students. The observed improvements were evident not only in the cognitive aspect but also in the affective and behavioral dimensions, albeit with varying levels of consistency. Students exhibited an enhanced understanding of the interconnectedness between human activities and ecosystem balance, followed by the emergence of caring attitudes and simple actions to protect the environment during the learning process. The findings of this study reinforce that learning effectiveness is determined not just by the employment of interactive media, but by the extent to which that media can connect concepts with students' real-world experiences. The integration of local contexts within learning media has proven to be an essential factor helping students grasp concepts in a more meaningful and relevant manner. Additionally, the high practicality level of the media supported student engagement in learning, allowing the instructional process to take place more effectively. Nonetheless, the results in the affective and behavioral aspects must be interpreted cautiously due to the potential for response bias and the limited duration of observations. Therefore, future research is advised to examine the sustainability of student behavioral changes over a longer timeframe and to integrate media usage with broader instructional programs. Overall, this study contributes to the development of environmental literacy education by demonstrating that simple media, when contextually and interactively designed, can serve as a relevant and applicable alternative within the elementary school context.

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Author Contributions

Conceptualization, methodology, data curation, writing—review and editing, S., S.D.M., and S.; validation, supervision, S.D.M. and S.; formal analysis, investigation, resources, writing—original draft preparation, S.

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Conflicts of Interest

The authors declare no conflict of interest.

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