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Developing Canva-Assisted Instructional Videos through the Recitation Method for Eighth-Grade Science Learning at SMPN 34 Padang

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Abstract

Students can struggle to understand abstract concepts in light and optics when science instruction makes limited use of audiovisual learning resources. This study developed a Canva-assisted instructional video paired with the recitation method and evaluated its validity, practicality, and effectiveness for 32 eighth-grade students at SMP Negeri 34 Padang. The study followed the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). Data from observations, interviews, expert validation questionnaires, practicality questionnaires, and pretests and posttests were analyzed using descriptive quantitative and qualitative methods. Media and subject-matter experts rated the video as highly valid, and its mean practicality score of 5 placed it in the highly practical category. Mean achievement scores increased from 61.68 on the pretest to 93.75 on the posttest, with all 32 students meeting the mastery criterion. The expert ratings and observed gains suggest that pairing the video with recitation is a practical option for teaching light and optics. The video offers a flexible way to visualize abstract concepts, while recitation encourages students to work independently and take responsibility for their learning.

Keywords: Instructional Video; Recitation Method; Canva; Science Education; Light and Optics

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INTRODUCTION

The development of science and technology has brought significant changes to various aspects of life, including the implementation of education. The integration of technology into learning is no longer merely intended to complement teaching and learning activities but has become a strategic alternative for creating more diverse, interactive, and learner-centered educational experiences. These changes require educators to develop learning processes that extend beyond information delivery and provide learners with opportunities to construct their understanding through various learning resources and experiences. One form of technological integration in education is the development of audiovisual-based instructional media, particularly instructional videos, which enable learning materials to be presented through an integrated combination of images, text, animation, and audio.

In the learning process, instructional media play an essential role as an intermediary for conveying information between educators and learners. Appropriate media selection can help clarify learning materials, increase learners' attention, and facilitate their understanding of the concepts being taught. These challenges become more complex when learning materials involve abstract concepts or require the visualization of processes that cannot be directly observed. Such conditions are particularly evident in science education. Science learning not only emphasizes the mastery of facts and theories but also requires learners to understand natural phenomena, establish conceptual relationships, and apply scientific knowledge to everyday life. Therefore, science education requires instructional strategies capable of connecting conceptual explanations with visual representations and concrete learning experiences.

One of the Grade VIII science topics that requires visual support is Light and Optics. This topic encompasses the properties of light, reflection, refraction, image formation by mirrors and lenses, and the application of optical principles in everyday life. Some of these concepts are not always easy to understand when presented solely through verbal explanations or descriptions in textbooks. Learners need visual representations of how light propagates, undergoes reflection and refraction, and forms images through different types of mirrors and lenses. When learning materials are not supported by adequate illustrations or visualizations, learners may experience difficulties connecting theoretical concepts with actual phenomena. Accordingly, instructional media are needed to present information

systematically while providing visual representations of scientific concepts that require more concrete explanations.

These problems were also identified through preliminary observations conducted by the researcher at SMP Negeri 34 Padang, particularly in the Grade VIII C science class. Based on observations conducted in collaboration with the Grade VIII C homeroom teacher, the science learning process was found to rely predominantly on conventional teaching methods and limited instructional media. The teacher primarily utilized textbooks and lecture-based instruction, resulting in relatively monotonous learning activities. This situation contributed to limited learner participation and difficulties in understanding the learning materials, particularly those requiring conceptual understanding and visualization. These issues were also reflected in the science learning achievement of Grade VIII C learners during the 2025/2026 academic year, as presented in Table 1.

Table 1. Science Learning Achievement Scores of Grade VIII C Students at SMP Negeri 34 Padang During the 2025/2026 Academic Year

No.	Score Range	Category	Frequency (F)	Percentage (P)
1	90–100	Excellent	1	3.13%
2	80–89	Good	10	31.25%
3	70–79	Fair	7	21.88%
4	60–69	Poor	14	43.75%
	Total		32	100%

Source: Grade VIII C Homeroom Teacher, SMP Negeri 34 Padang.

As presented in Table 1, of the 32 learners in Grade VIII C, 14 (43.75%) obtained scores ranging from 60 to 69, categorized as poor. Furthermore, seven learners (21.88%) achieved scores between 70 and 79, categorized as fair; ten learners (31.25%) obtained scores between 80 and 89, categorized as good; and one learner (3.13%) achieved a score between 90 and 100, categorized as excellent. These data indicate that the group of learners in the poor achievement category represents the largest proportion compared with the other categories. This condition suggests that learners' science achievement requires further attention and improvement through the selection of instructional strategies and media that align with the characteristics of the subject matter and learners' educational needs.

To obtain more comprehensive information regarding these conditions, the researcher also conducted preliminary interviews with several Grade VIII learners on Wednesday, August 26, 2026. The interview findings revealed that some learners continued to experience difficulties in understanding science concepts, particularly topics requiring

conceptual comprehension and visual representation, such as Light and Optics. The learners explained that when teachers presented the materials exclusively through textbooks or verbal explanations, they sometimes struggled to visualize the processes of light reflection, light refraction, and image formation by mirrors and lenses. In contrast, learners found the materials easier to understand when accompanied by pictures, videos, animations, or visual examples that could illustrate the concepts more clearly.

The interview findings also indicated that learners tended to show greater interest in participating in lessons when instructional materials were delivered through visually appealing media rather than text-based presentations alone. Instructional videos were considered helpful because they enabled learners to review the materials whenever certain explanations remained unclear. Furthermore, assignments given after lessons were perceived as useful for reinforcing learners' recall of previously studied materials, particularly when the assignments were directly related to the content presented during the lesson. These findings highlight the need for instructional media that not only present learning materials in an engaging and visually appealing manner but also provide learners with opportunities to review, comprehend, and complete assignments in a structured manner.

One alternative to address these challenges is the development of instructional videos as audiovisual learning media that integrate images, text, animation, and audio to facilitate students' understanding of complex concepts (Sa'adah et al., 2025; Hanafi et al., 2024; Rahmadani et al., 2023). Their effectiveness depends on pedagogical design, including coherence, segmentation, learner control, and active learning activities (Fyfield et al., 2022; Noetel et al., 2021; Zhang et al., 2025). Furthermore, visual signaling can direct learners' attention to essential information, improve knowledge retention, and reduce extraneous cognitive load (Rodemer et al., 2022; Tannert et al., 2023). Therefore, instructional videos should be designed not merely to deliver information but also to support cognitive processing, maintain engagement, and promote active participation and deeper learning.

The development of instructional videos in this study utilizes Canva as the primary application for designing and producing the learning media (Jatmiko et al., 2024). Canva provides various design features that enable the integration of text, images, illustrations, animations, audio, and other visual elements into a single instructional product (Huda et al., 2025). The use of this application offers educators opportunities to produce more communicative audiovisual media tailored to the learning materials (Sari & Sidik, 2025).

Oktavia et al. (2023), in their study on the design of Grade VIII science instructional media using Canva through a microblogging model, reported positive findings in terms of the validity, practicality, and effectiveness of the developed media. Furthermore, Kurnia and Sunaryati (2023), in their research on Canva-based instructional video media, demonstrated that the developed media received positive evaluations from media experts, subject matter experts, teachers, and learners, while also showing potential to increase learning interest. Gurning et al. (2024) also found that Canva-based instructional media could be utilized to support learners' creativity and academic achievement. These findings strengthen the argument that Canva has considerable potential as a tool for developing digital instructional media. Nevertheless, the success of instructional media depends not only on the application used but also on the relevance of the learning materials, instructional design, learner characteristics, and accompanying learning activities.

In addition to media selection, appropriate teaching methods are essential to ensure active student engagement. Instructional videos should therefore be combined with learning activities that encourage students to process, apply, and demonstrate their understanding (Beheshti et al., 2018). One relevant approach is the recitation method, which involves structured individual or group assignments completed within a specified period and subsequently evaluated by the teacher. This method encourages knowledge application, responsibility, and independent learning. Previous studies by Januarti et al. (2021) and Putri et al. (2023) highlight the contribution of the recitation method to students' science learning outcomes. Thus, integrating this method into instructional videos is expected to create more active, structured, and meaningful learning experiences.

Theoretically, Canva-assisted instructional videos integrated with the recitation method are grounded in Mayer's Cognitive Theory of Multimedia Learning, which explains that learners process information through limited visual and verbal channels. Meaningful learning occurs when words and images are presented coherently and systematically to minimize unnecessary cognitive load. Supporting this perspective, Fyfield et al. (2022) emphasize coherence, segmentation, learner control, and learning activities in video design, while Noetel et al. (2021) demonstrate the positive effects of instructional videos on learning outcomes. Furthermore, Zhang et al. (2025) highlight that embedding active learning strategies enhances knowledge retention, comprehension, and transfer. Therefore, instructional videos should be designed to facilitate cognitive processing, maintain engagement, and encourage active participation for deeper learning.

Several previous studies have provided empirical foundations for the development of audiovisual and digital instructional media in science education. Sriani et al. (2023) developed Articulate Storyline-based science learning multimedia on the topic of Light and Optical Instruments. Their study is relevant to the present research because it addresses the same subject area, which requires visual representations to facilitate students' understanding. However, the product was developed using Articulate Storyline and did not incorporate the recitation method into Canva-assisted instructional videos. Similarly, Mawarti et al. (2024) developed Powtoon-based animated science instructional media to promote independent learning among Grade VIII students. Their findings showed that the media achieved a validity score of 0.86, a practicality level of 83.95%, and an N-Gain score of 0.79, categorized as high. These findings demonstrate the potential of video-based media to support learner independence and improve learning outcomes. Nevertheless, their study differed from the present research in terms of the application used, product format, and integration of the assignment method.

Oktavia et al. (2023) developed Canva-based science instructional media for Grade VIII students using a microblogging format. Although their study shares similarities with the present research in its use of Canva and its focus on junior secondary science education, the resulting product was designed as microblogging media rather than instructional videos incorporating the recitation method. Meanwhile, Kurnia and Sunaryati (2023) investigated the development of Canva-based instructional videos to enhance students' learning interest. Their findings support the use of Canva as a tool for developing instructional video media. However, their study did not specifically address the topic of Light and Optics among Grade VIII students or integrate the recitation method into the instructional videos.

Based on the review of previous studies, a research gap can be identified in the integration of instructional media, teaching methods, subject matter, and development context. Previous studies have examined the development of multimedia on Light and Optical Instruments, animated videos to foster independent learning, and the use of Canva as a medium for science instruction. However, the studies reviewed have generally focused on developing particular media or implementing specific instructional approaches separately. No study identified in the literature reviewed has specifically integrated Canva-assisted instructional videos with the recitation method for teaching Light and Optics to Grade VIII learners at SMP Negeri 34 Padang. This gap highlights the need to develop instructional media that not only emphasize the visualization of learning materials but also incorporate

assignment-based activities as an integral component of learners' educational experiences. Accordingly, the present study offers a distinct contribution by combining Canva-assisted audiovisual media and the recitation method into a single instructional product designed in response to the identified needs of science education at the research site.

The novelty of this study lies in integrating Canva-assisted instructional videos with the recitation method for Grade VIII Light and Optics content. The videos combine text, images, animations, and narration with assignments provided at the end of each section and accessible through QR codes. This integration enables students to review learning materials independently and apply their understanding through structured tasks. Furthermore, the content, design, and assignments are tailored to students' needs and the characteristics of the subject matter at SMP Negeri 34 Padang. Thus, the study's contribution lies not merely in using Canva but in developing an integrated instructional design that combines audiovisual media and assignment-based learning to address the identified educational needs.

Based on the identified problems, theoretical foundations, and research gaps, this study aims to develop Canva-assisted instructional videos incorporating the recitation method for Grade VIII science learning at SMP Negeri 34 Padang. The development follows the ADDIE model, comprising Analysis, Design, Development, Implementation, and Evaluation. The product is assessed in terms of validity, practicality, and effectiveness, particularly for the topic of Light and Optics. This study is expected to provide an alternative instructional medium that supports engaging and systematic teaching while improving students' conceptual understanding and learning outcomes through active and independent learning activities.

METHODS

This study employed a Research and Development (R&D) approach using the ADDIE development model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The study aimed to develop Canva-assisted instructional videos incorporating the recitation method for Science (Natural Sciences) education, particularly the topic of Light and Optics for Grade VIII students at SMP Negeri 34 Padang, and to evaluate the validity, practicality, and effectiveness of the developed product.

The study was conducted at SMP Negeri 34 Padang, involving 32 Grade VIII students as research participants in the product trial. In addition, the validation process

involved two validators: a lecturer from the Department of Curriculum and Educational Technology, who served as the media expert, and a Grade VIII science teacher, who served as the subject matter expert. The practicality assessment involved teachers and students as users of the instructional media, while product effectiveness was measured based on improvements in students' learning outcomes through tests administered before and after the implementation of the instructional media.

The research procedures followed the five stages of the ADDIE model. The first stage, Analysis, involved observations and interviews with teachers and students to identify learning needs, student characteristics, curriculum requirements, and the characteristics of the Light and Optics topic. The second stage, Design, included the preparation of learning materials, learning objectives, storyboard, narration, illustrations, animations, and video layout. The third stage, Development, involved producing instructional videos using Canva by integrating text, images, animations, audio, and assignments based on the recitation method. The resulting product was subsequently validated by media and subject matter experts and revised based on their feedback and recommendations. The fourth stage, Implementation, involved testing the product in Grade VIII science classes. This stage included administering a pre-test, using the instructional videos, completing assignments through the recitation method, completing practicality questionnaires, and administering a post-test. The fifth stage, Evaluation, was conducted to assess the feasibility and effectiveness of the product based on expert validation results, user feedback, and students' learning outcomes.

Data were collected using both qualitative and quantitative approaches. Qualitative data were obtained through observations, interviews, documentation, and feedback and recommendations from validators and users. Quantitative data were collected through expert validation questionnaires, teacher and student practicality questionnaires, and learning achievement tests in the form of pre-tests and post-tests. The questionnaires employed a five-point Likert scale, ranging from 1 to 5. The validation questionnaires were used to assess the suitability of the learning materials and the quality of the instructional media, while the practicality questionnaires were administered to evaluate the ease of use and benefits of the media in the learning process.

Data were analyzed using descriptive qualitative and quantitative techniques. Qualitative data were analyzed by organizing observations, interview findings, criticisms, and

suggestions, which served as the basis for product improvement. Meanwhile, quantitative data were analyzed in terms of validity, practicality, and effectiveness.

RESULTS

1. Product Development Results

At the Analysis stage, the findings indicated that Science instruction was still predominantly delivered through lectures and the use of basic PowerPoint presentations. Students experienced difficulties understanding the topic of Light and Optics, which requires visual representation, particularly the concepts of reflection, refraction, lenses, and optical instruments. The results of this needs analysis served as the basis for developing instructional videos that integrate visual and audio elements.

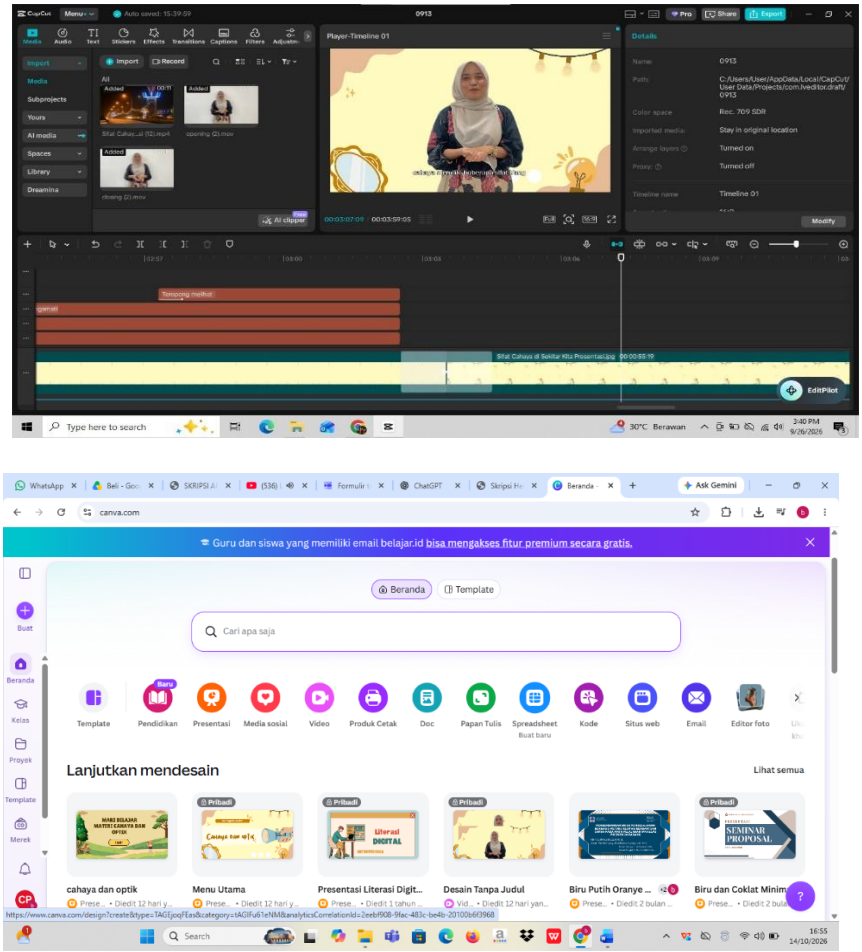


Figure 1. Design stage

At the Design stage on figure 1, the learning materials, script, storyboard, illustrations, animations, narration, and video presentation sequence were prepared using Canva. The Development stage resulted in instructional videos incorporating text, images,

animations, transitions, and voice narration. The product also integrated the recitation method by providing assignments for students to complete after studying the learning materials. Subsequently, the product was validated by media and subject matter experts and revised based on their feedback.

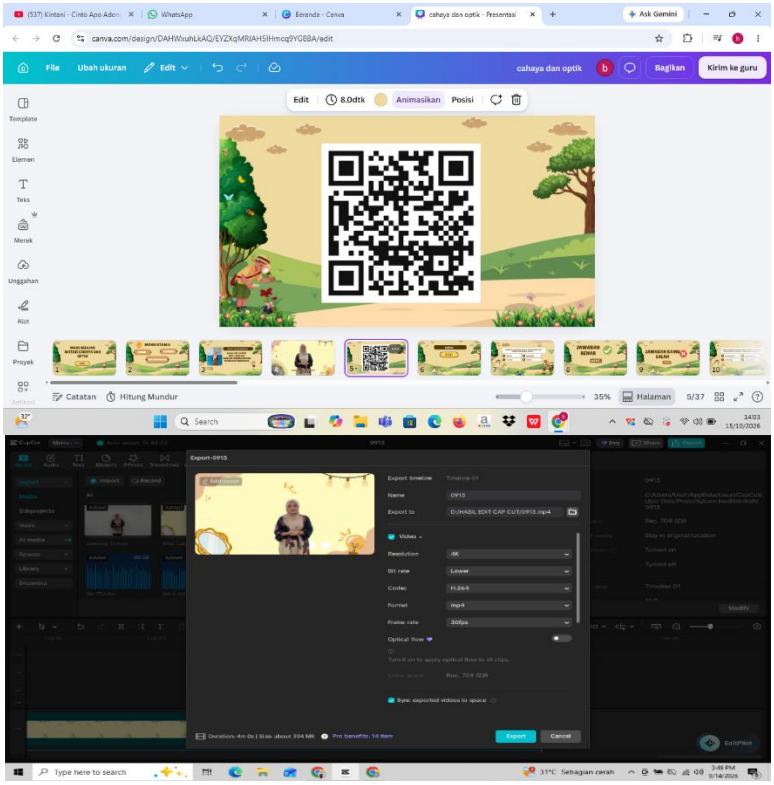


Figure 2. Implementation stage

Based on figure 2 the Implementation stage, the instructional videos were tested with 32 Grade VIII students at SMP Negeri 34 Padang. The trial involved using the media during classroom instruction, completing practicality questionnaires, and administering learning achievement tests before and after the use of the media. The Evaluation stage was conducted to determine product quality based on the validation results, user responses, and improvements in students' learning outcomes.

2. Media Validity Test Results

The validity assessment was conducted by subject matter and media experts to determine the appropriateness of the instructional content and the quality of the developed product.

Table 2. Results of the Instructional Video Validation

Validator	Stage	Mean Score	Category
Subject Matter Expert	Validation	4.10	Valid
Media Expert I	Stage I	3.64	Valid
Media Expert II	Stage I	4.70	Highly Valid
Media Expert II	Stage II	4.88	Highly Valid

Based on table 2, the subject matter expert validation yielded a mean score of 4.10, which was categorized as valid. Meanwhile, the first-stage media validation produced mean scores of 3.64 from the first validator and 4.70 from the second validator. Following product revisions, the second-stage media validation conducted by the second validator yielded a mean score of 4.88, categorized as highly valid.

These results indicate that the instructional videos met the required criteria in terms of content appropriateness, visual presentation, design, technical quality, communication, and implementation of the recitation method. Product revisions primarily focused on the presentation of assignments. The assignments, which had initially been provided in printed form, were converted into digital assignments accessible by scanning a QR code, enabling students to access and complete the tasks using their smartphones.

3. Practicality Test Results

The practicality test was administered to 32 Grade VIII students at SMP Negeri 34 Padang after they had used the instructional videos. The assessment covered five aspects: ease of use, accessibility, clarity of presentation, media attractiveness, and implementation of the recitation method. The overall mean score was 5, indicating that the product was highly practical.

Table 3. Practicality Test Results

Assessment Aspect	Mean Score
Ease of Use	5.00
Accessibility	5.00
Clarity of Presentation	4.60
Media Attractiveness	4.60
Recitation Method	5.80
Overall Mean (Reported)	5.00

Based on table 3, these findings demonstrate that the instructional videos were easy to use and access, presented the learning materials clearly, and provided students with an

engaging learning experience. The integration of the recitation method also gave students opportunities to complete assignments after watching and studying the instructional materials.

4. Effectiveness Test Results

Table 4. Comparison of Students' Learning Outcomes

Indicator	Pre-test	Post-test
Number of Students	32	32
Mean Score	61.68	93.75
Learning Mastery	0%	100%
Mastery Criterion	KKTP 80	KKTP 80

The effectiveness test was conducted by comparing students' learning outcomes before (*pre-test*) and after (*post-test*) using the instructional videos. The test consisted of 15 objective questions, with the minimum learning achievement criterion (KKTP) set at 80. The results showed that the mean pre-test score was 61.68, while the mean post-test score increased to 93.75.

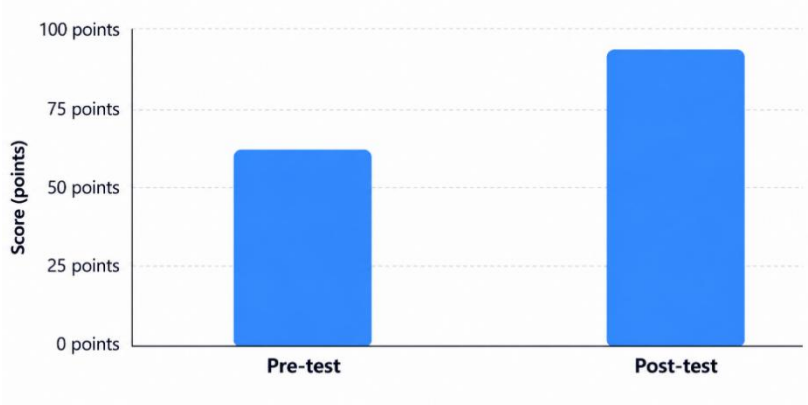


Figure 3. Comparison of Mean Learning Outcomes

Based on figure 3, Before the instructional media were used, none of the students achieved the KKTP. Following the use of the instructional videos, all students obtained scores above the KKTP, resulting in a learning mastery rate of 100%. These improvements indicate that Canva-assisted instructional videos incorporating the recitation method supported students' learning achievement in the topic of Light and Optics.

DISCUSSION

The findings indicate that the development of Canva-assisted instructional videos incorporating the recitation method produced learning media that met the criteria of validity,

practicality, and effectiveness for Grade VIII Science, particularly the topic of Light and Optics, at SMP Negeri 34 Padang. The ADDIE development model enabled each stage to be carried out systematically, from needs analysis to product evaluation. The preliminary analysis revealed that Science instruction was still predominantly delivered through lectures and basic PowerPoint presentations, whereas the topic of Light and Optics requires visual representations to help students understand abstract concepts. Therefore, developing instructional videos that combine text, images, animations, and narration provided an alternative means of addressing these learning needs.

In terms of validity, the product received positive evaluations from the subject matter and media experts. The subject matter validation yielded a mean score of 4.10, while the second-stage media validation obtained a score of 4.88, categorized as highly valid. These findings indicate that the product met the criteria for content relevance, visual presentation, design, language, and instructional delivery. The revision process also played an important role in improving product quality. Regarding the instructional content, revisions involved organizing the materials more systematically, simplifying the language, and adding illustrations to clarify the concepts. Meanwhile, revisions to the media included providing access to assignments through QR codes, enabling students to access tasks more conveniently after watching the videos. Thus, expert validation served not only as an assessment of product feasibility but also as a mechanism for refining the product before its implementation in classroom instruction.

In terms of practicality, the instructional videos obtained an overall mean score of 5.00, categorized as highly practical. This result indicates that the media were easy for students to use, provided straightforward access, and presented the learning materials in a clear and engaging manner. Canva enabled the materials to be delivered through a combination of audiovisual elements, while QR code integration facilitated access to assignments. This combination supports the use of the media in classroom activities as well as for independent learning. Therefore, the practicality assessment demonstrates that the product was not only conceptually appropriate but also applicable in a school learning environment.

Regarding effectiveness, students' learning outcomes improved following the use of the instructional videos. The mean pre-test score of 61.68 increased to 93.75 on the post-test. Furthermore, the learning mastery rate increased from 0% to 100%, based on the

Minimum Learning Achievement Criterion (KKTP) of 80. This improvement indicates that students achieved better learning outcomes after participating in instruction using the developed media. The presentation of concepts through images, animations, text, and voice narration helped visualize reflection, refraction, and the operating principles of optical instruments, which had previously been difficult for students to understand abstractly. Assignments provided through the recitation method also gave students opportunities to review the materials and reinforce their understanding by completing learning tasks.

Overall, the three assessment results indicate that the developed product fulfilled the objectives of the study. Nevertheless, the improvement in pre-test and post-test scores should be interpreted in accordance with the research design employed. The findings demonstrate an improvement following the use of the media in the trial group; however, they do not independently establish that the entire improvement was attributable solely to the instructional videos.

The findings of this study are consistent with several previous studies on the development of audiovisual and digital technology-based learning media. For example, Mawarti et al. (2024) developed animated instructional videos using the Powtoon application for Grade VIII Science and reported that the product was highly valid, highly practical, and highly effective. The study also reported an N-Gain score of 0.79, categorized as high. These similar findings suggest that audiovisual media can serve as an alternative for helping students understand Science content through more concrete visual representations.

Oktavia et al. (2023) also demonstrated that the development of Canva-assisted Science learning media produced valid, practical, and highly effective results, with an effectiveness score of 0.96. These findings support the use of Canva as a digital learning media development application capable of presenting instructional content in an engaging manner. Meanwhile, Sriani et al. (2023) developed Articulate Storyline-based instructional multimedia for the topic of Light and Optical Instruments using the ADDIE model. This study is relevant in terms of both the subject matter and the product development procedures.

Although this study shares similarities with previous research, it offers a distinct feature through the integration of the recitation method into Canva-assisted instructional videos. Whereas audiovisual media development generally emphasizes content delivery through visual and audio elements, this study incorporates assignments to be completed after

students watch the videos. Assignments accessible through QR codes provide students with opportunities to review the materials, complete tasks, and develop a sense of responsibility for their learning. Accordingly, the distinctive contribution of this study lies in combining Canva-based instructional videos with the recitation method, specifically for the topic of Light and Optics in Grade VIII.

The findings of this study have theoretical and practical implications for the development of Science learning media. Theoretically, they reinforce the use of multimedia learning approaches that integrate visual and verbal elements in information delivery. The use of images, animations, text, and narration enables abstract concepts to be presented in a more concrete manner, potentially supporting students' comprehension. Furthermore, integrating the recitation method highlights the importance of combining instructional media with learning activities that encourage students to process and consolidate previously acquired information.

Practically, the developed instructional videos can be used by teachers as supplementary media for Science instruction, particularly when teaching Light and Optics. Teachers can use the videos to explain reflection, refraction, and optical instruments through more engaging visual representations. For students, the media can serve as an independent learning resource because the instructional content can be replayed as needed. The inclusion of QR codes also facilitates access to digital assignments, making the implementation of the recitation method more practical.

For schools, this development can serve as a reference for utilizing educational technology to support instructional innovation. The developed product may also provide a foundation for creating digital learning media for other topics. Thus, this study contributes an alternative learning medium that combines audiovisual technology and assignment-based activities to support more engaging instruction and promote student learning autonomy.

This study has several limitations that should be considered when interpreting its findings. First, the developed materials covered only one Grade VIII Science topic, namely Light and Optics, and did not encompass all the topics taught during a semester. Second, product development was subject to limitations in terms of time, budget, and supporting facilities. Third, the use of certain Canva features requires a stable internet connection and offers fewer advanced editing capabilities than professional software applications. Fourth, the product was tested with only 32 Grade VIII students at SMP Negeri 34 Padang.

Consequently, the findings cannot yet be widely generalized to schools with different student characteristics and learning facilities. In addition, the effectiveness assessment was based on a comparison of pre-test and post-test results within a single trial group and did not involve a control group for comparison. Future research is therefore recommended to develop learning media for other Science topics, involve a larger number of students and schools, and employ research designs that allow for stronger comparisons when evaluating the effectiveness of instructional media.

CONCLUSION

This study successfully developed Canva-assisted instructional videos incorporating the recitation method for Grade VIII Science, particularly the topic of Light and Optics, at SMP Negeri 34 Padang, using the ADDIE development model. The assessment results indicated that the product met the validity and practicality criteria at a very good level. In terms of effectiveness, students' mean learning outcome increased from 61.68 on the *pre-test* to 93.75 on the *post-test*, with a learning mastery rate of 100%. These findings indicate that the developed instructional videos are suitable for use as supplementary media in Science instruction.

The contribution of this study lies in integrating Canva-based audiovisual media with the recitation method through digital assignments accessible via QR codes. This integration offers an alternative instructional approach that combines content visualization, audiovisual information delivery, and assignment-based activities to support students' understanding and learning autonomy. Thus, this study contributes to the development of technology-based Science learning media, particularly for topics that require the visualization of abstract concepts.

Future research is recommended to develop similar media for a wider range of topics and educational levels, involve more students and schools, and evaluate product effectiveness using an experimental design with a control group. Further development should also consider technological accessibility and internet availability to ensure that the media can be used optimally under various learning conditions.

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