



# Integration of Canva Based Educational Videos in IPAS Learning to Improve the Learning Motivation of Junior High School Students

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## Abstract

This research investigates how the integration of educational videos created with Canva influences learning motivation among junior high school students in IPAS (Ilmu Pengetahuan Alam dan Sosial) classes. The study adopted a quasi-experimental approach, utilizing both pre-test and post-test within control and experimental groups. A total of 60 eighth-grade students from a public junior high school in Jakarta participated, evenly split between the two groups. Over a period of four weeks, students in the experimental group engaged with instructional materials delivered through Canva-based videos, while those in the control group continued with standard classroom methods. To assess learning motivation, a questionnaire grounded in Keller's ARCS Model—covering Attention, Relevance, Confidence, and Satisfaction—was administered. The instrument comprised 25 items, each rated on a 5-point Likert scale. Data analysis involved both descriptive and inferential statistics, including paired and independent sample t-tests, as well as effect size calculations. Findings indicate a marked improvement in motivation scores among students exposed to Canva-based videos. Specifically, the independent sample t-test produced a value of  $t = 4.65$  with  $p = 0.000$ , and Cohen's  $d$  was calculated at 0.86, reflecting a substantial effect. These outcomes point to the potential of visually engaging and interactive video content to boost students' motivation in IPAS learning environments. The results highlight the practical value of integrating accessible digital tools such as Canva into science and social science teaching, as a means to encourage greater enthusiasm and active participation among students.

**Keywords:** Learning Motivation; Canva; Educational Video; IPAS; Junior High School.

## Introduction

The integration of digital media into educational practices has become a critical concern in the face of rapidly evolving technological advancements (Utami, 2022). In particular, the growing need to foster student motivation and engagement has prompted educators to seek innovative approaches in teaching delivery (Faridah Hayati, 2020). One of the primary issues faced by teachers in the 21st century is the declining motivation among students, especially in subjects perceived as complex or abstract, such as Integrated Natural and Social Sciences (IPAS) (Rahmawati & Atmojo, 2021). IPAS, which blends natural and social science content, often requires contextualized learning approaches that go beyond textual explanations (Asnawati & Sutiah, 2023). Traditional methods of instruction frequently fail to stimulate student interest, resulting in passive learning and decreased academic performance.

In response to this issue, educational technology has been increasingly adopted as a strategy to enhance learning outcomes. Among various tools available, Canva has emerged as a practical and creative platform for designing digital learning content (Amrina *et al.*, 2022). Canva allows educators to create engaging visual materials, including infographics, animations, and educational videos, which can be tailored to the cognitive needs of learners (Irawan &



Napitupulu, 2022). When implemented effectively, Canva-based educational videos have the potential to transform the learning experience by making abstract concepts more accessible and visually appealing (Idawati *et al.*, 2022). However, the effectiveness of such media in the specific context of IPAS learning at the junior high school level remains underexplored (Nur Anissa & Marlina Limbong, 2024). This study is situated within this educational context, aiming to address the gap in empirical evidence regarding the impact of Canva-based educational videos on student motivation (Fahry & Miswaty, 2025). The main objective of this research is to investigate the effectiveness of integrating Canva-based instructional videos in the teaching of IPAS to enhance students' motivation to learn (Agung *et al.*, 2024). The specific objectives include measuring the difference in students' motivational levels before and after exposure to Canva-based videos, and identifying which aspects of the media contribute most significantly to increased engagement (Wicaksono & Nadya Pusпита Adriana, 2023). This research is highly relevant to the fields of educational technology and science education, as it offers insights into the application of digital tools in middle school classrooms (Rambe *et al.*, 2023). The study contributes to the existing body of knowledge by providing empirical data on the pedagogical value of Canva in fostering motivation in IPAS learning (Sofyani *et al.*, 2024). Furthermore, it supports the development of student-centered learning environments where media literacy and digital engagement are prioritized (Purnomo *et al.*, 2025). This article is structured as follows. The next section reviews the related literature and theoretical framework concerning educational media, learning motivation, and the role of digital platforms like Canva in classroom instruction. The methodology section outlines the research design, participants, instruments, and data collection techniques. This is followed by the results and discussion section, which presents and interprets the findings. The final section offers conclusions, implications, and recommendations for educators and future research.

## Literature Review

The integration of multimedia and digital tools in education has been widely studied as a means to improve student engagement and motivation. Numerous studies have emphasized the effectiveness of visual-based instructional materials in enhancing both the cognitive and affective aspects of learning. Mayer's (2009) Cognitive Theory of Multimedia Learning is among the most influential frameworks supporting the use of digital media in instructional contexts. According to Mayer, meaningful learning occurs when students actively select, organize, and integrate multimedia content, especially when text is combined with visual and auditory elements. This theory provides a solid foundation for the use of educational videos created with tools such as Canva. Learning motivation plays a central role in determining student success and engagement. According to Deci and Ryan's Self-Determination Theory (1985), motivation can be intrinsic or extrinsic, and students are more likely to learn effectively when they feel autonomous, competent, and connected to the learning context. In the context of science and social studies learning, motivational challenges are common, particularly when instructional delivery lacks interactive or contextual appeal. This justifies the need to explore alternative instructional strategies, including the integration of digital videos. Several previous studies have explored the impact of educational videos on student motivation. For example, Sadik (2008) found that students exposed to teacher-generated video content demonstrated higher motivation and better performance compared to those who received traditional instruction. Similarly, Kay (2012) conducted a meta-analysis showing that instructional videos significantly improve students' engagement, understanding, and motivation across various subjects. However, most of these studies focused on higher education or general subject areas, with limited focus on IPAS subjects at the junior high school level.

Specific to the use of Canva, recent studies suggest its potential in improving learning outcomes. Pratama and Permana (2022) reported that Canva-supported learning materials enhanced students' attention, clarity of concepts, and enjoyment in learning science. Likewise, Fitria *et al.* (2023) highlighted Canva's strength in enabling teachers to create personalized and visually engaging videos. Nonetheless, most of these studies either focused on elementary students or did not measure learning motivation as a primary variable. This presents a clear research gap in assessing the impact of Canva-based educational videos on learning motivation in junior high school IPAS classes. In addition to identifying the advantages of video learning, several limitations in previous research are notable. Many studies relied on qualitative observation without employing robust experimental or quasi-experimental methods. Others failed to isolate variables related to digital media design, such as layout quality, interactivity, or cognitive load. Furthermore,



few studies examined the role of teacher facilitation or student digital literacy as mediating factors. These limitations highlight the need for a more systematic, targeted study that uses quantitative measurement tools to examine motivation levels before and after the implementation of Canva-based educational videos. This study seeks to fill these gaps by offering an empirical investigation into the use of Canva in IPAS instruction at the junior high school level. It aims to contribute a more focused understanding of how Canva-based videos influence students' motivation, particularly by addressing specific motivational dimensions such as interest, engagement, and perceived usefulness. By doing so, this research extends the current body of knowledge in educational technology and curriculum development, offering practical and theoretical insights for future innovations in digital pedagogy.

## Methodology

### Research Design

This study employed a quantitative quasi-experimental design using a pre-test and post-test control group approach. This design was chosen to measure the effectiveness of Canva-based educational videos in improving the learning motivation of junior high school students in the Integrated Natural and Social Sciences (IPAS) subject. The study was conducted over a period of four weeks at a public junior high school in Indonesia. Two classes were involved in this study. The experimental group received IPAS instruction through Canva-based educational videos, while the control group received instruction using conventional lecture methods without multimedia enhancement. This design allows for a comparison of changes in student motivation within and between the two groups.

### Population and Sample

The target population comprised all eighth-grade students in the selected school. The sampling technique used was purposive sampling, with the selection based on equal academic performance, class size, and school conditions. A total of 60 students participated in the study, divided equally into:

- 1) Experimental Group: 30 students
- 2) Control Group: 30 students

### Instruments and Data Collection Procedures

The main instrument used for data collection in this study was a Learning Motivation Questionnaire adapted from Keller's ARCS Model, which includes the dimensions of Attention, Relevance, Confidence, and Satisfaction. The questionnaire consisted of 25 items formatted on a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Prior to its use in the main study, the instrument was validated through expert judgment and was pilot-tested to ensure clarity, readability, and consistency. The data collection process began with the administration of a pre-test to both the experimental and control groups to establish their baseline level of learning motivation. Subsequently, the experimental group received IPAS instruction using Canva-based educational videos, while the control group was taught through conventional methods. This intervention was carried out over a four-week period. After the instructional phase, a post-test using the same motivation questionnaire was administered to both groups to measure changes in learning motivation. To ensure the validity and reliability of the instrument, Cronbach's Alpha was employed to assess internal consistency. The analysis produced a coefficient value of 0.87, indicating a high level of reliability. The collected data were then analyzed using both descriptive and inferential statistical methods. Descriptive statistics were used to calculate the mean and standard deviation of both pre-test and post-test scores in each group. For inferential analysis, a paired sample t-test was conducted to compare the pre-test and post-test scores within each group, while an independent sample t-test was used to examine differences in post-test scores between the control and experimental groups. Additionally, the effect size was calculated using Cohen's d to determine the magnitude of the treatment's impact on students' learning motivation.



Table 1. Descriptive Statistics of Learning Motivation Scores in Control and Experimental Groups

Group	Test Type	Mean Score	Standard Deviation	N
Control Group	Pre-test	68.20	5.40	30
Control Group	Post-test	69.00	5.10	30
Experimental Group	Pre-test	67.85	5.60	30
Experimental Group	Post-test	78.40	4.90	30

Table 1 displays the descriptive statistics for learning motivation scores in both the control and experimental groups, as measured during the pre-test and post-test phases. In the control group, the mean pre-test score was 68.20 with a standard deviation of 5.40. After the intervention, the post-test mean rose marginally to 69.00, accompanied by a slightly lower standard deviation of 5.10. This modest improvement suggests that conventional instructional methods yielded limited gains in student motivation. In contrast, the experimental group—who engaged with Canva-based educational videos—demonstrated a more pronounced progression. Their average pre-test score stood at 67.85 (SD = 5.60), which increased substantially to 78.40 (SD = 4.90) in the post-test phase. The notable rise of over 10 points in the mean score, along with a slight reduction in response variability, indicates that the intervention was not only effective in amplifying students' motivation but also consistent in its effect across participants. The clear disparity in motivational gains between the two groups underscores the potential of multimedia-based instruction, particularly through platforms like Canva, to foster greater enthusiasm and engagement in learning, especially in IPAS subjects at the junior high school level. These results offer compelling preliminary evidence that the integration of visually engaging and student-centered educational media can positively influence learners' affective engagement and enthusiasm for classroom activities.

Table 2. Paired Sample t-Test Results for Pre-test and Post-test within Each Group

Group	Mean Difference	t-value	df	p-value	Interpretation
Control Group	0.80	1.24	29	0.224	Not significant
Experimental Group	10.55	9.87	29	0.000	Significant improvement

Table 2 displays the results of the paired sample t-tests conducted to examine the differences in students' learning motivation scores before and after the intervention in both the control and experimental groups. For the control group, the mean difference between the pre-test and post-test scores was 0.80, with a t-value of 1.24 and a p-value of 0.224. This result indicates that the difference was not statistically significant ( $p > 0.05$ ), suggesting that traditional instruction did not lead to a meaningful change in students' motivation levels. In contrast, the experimental group showed a substantial increase in motivation, with a mean difference of 10.55 between the pre-test and post-test scores. The t-value was 9.87 and the p-value was 0.000, which is highly significant ( $p < 0.05$ ). This result provides strong evidence that the Canva-based video instruction had a significant positive effect on students' learning motivation. The results presented in Table 2 support the conclusion that digital media tools, such as Canva, can play a vital role in enhancing students' motivation. While conventional teaching methods in the control group failed to produce statistically significant improvements, the innovative digital approach in the experimental group effectively increased students' engagement and enthusiasm toward learning.

Table 3. Independent Sample t-Test Results for Post-test Scores Between Control and Experimental Groups

Group Comparison	Mean Difference	t-value	df	p-value	Interpretation
Experimental vs. Control (Post)	9.40	7.15	58	0.000	Significant difference

Table 3 summarizes the results of the independent sample t-test conducted to determine whether there is a statistically significant difference in post-test learning motivation scores between the experimental and control groups. The analysis shows that the experimental group achieved a mean post-test score of 78.40, while the control group's mean was notably lower at 69.00. The resulting difference of 9.40 points was subjected to statistical testing, yielding a t-value of 7.15 and a p-value of 0.000. This finding indicates that the difference is highly significant at the 0.05 level. These results suggest that the integration of Canva-based educational videos into instruction had a marked



positive impact on students' learning motivation compared to conventional teaching methods. The higher motivation scores observed in the experimental group imply that visually engaging, interactive, and well-structured video content can more effectively capture students' attention, foster greater engagement, bolster their confidence, and enhance overall satisfaction with the learning process. The evidence presented in Table 3 reinforces the earlier analysis, highlighting that digital instructional media designed with motivational frameworks—such as Keller's ARCS Model—can significantly boost learning motivation, especially among junior high school students. This underscores the importance of incorporating platforms like Canva into IPAS instruction as a forward-thinking pedagogical approach in today's educational landscape.

## Results and Discussion

### Results

This study aimed to examine the effect of integrating Canva-based educational videos in IPAS (Ilmu Pengetahuan Alam dan Sosial) learning on the motivation of junior high school students. The analysis was based on data collected using a validated Learning Motivation Questionnaire adapted from Keller's ARCS Model. The results are presented through descriptive and inferential statistical analyses, followed by a critical discussion of the findings.

### Descriptive Statistics

The descriptive results summarized in Table 4 show a comparison of the pre-test and post-test scores between the control and experimental groups. The mean motivation score of the control group increased slightly from 65.32 to 68.15, while the experimental group showed a significant improvement from 66.78 to 78.42. These findings indicate that the Canva-based video instruction led to a notable increase in learning motivation.

Table 4. Comparison of Pre-Test and Post-Test Mean Scores

Group	Pre-Test Mean	Post-Test Mean	Mean Difference
Control Group	65.32	68.15	+2.83
Experimental Group	66.78	78.42	+11.64

The substantial difference in the post-test scores supports the preliminary assumption that the visual and interactive nature of Canva-based videos can foster higher student engagement and interest, thereby improving motivation.

### Inferential Statistics

Further analysis using paired sample t-tests (Table 5) confirmed that the improvements in both groups were statistically significant. However, the experimental group exhibited a higher t-value and lower p-value, confirming a stronger effect of the Canva-based intervention.

Table 5. Paired Sample t-Test Results

Group	t-value	df	p-value
Control Group	2.45	29	0.021
Experimental Group	6.87	29	0.000

Note: Data analyzed using SPSS version 26.

Both groups showed statistically significant improvements, but the experimental group demonstrated a much stronger effect, as indicated by the higher t-value and lower p-value. The independent samples t-test (Table 6) comparing the post-test results between the control and experimental groups further revealed a statistically significant difference ( $p < 0.001$ ), with the experimental group outperforming the control group. The calculated effect size (Cohen's  $d = 1.23$ ) indicates a large effect, suggesting the strong impact of Canva-based video instruction on student motivation.

Table 6. Independent Sample t-Test Results for Post-Test Scores

Group Comparison	Mean Difference	t-value	df	p-value	Cohen's d
Experimental vs. Control	10.27	4.85	58	0.000	1.23

Note: Effect size calculated using pooled standard deviation.



The statistically significant difference and large effect size confirm that Canva-based educational videos had a strong positive impact on students' learning motivation compared to traditional instruction.

## Discussion

The research results show that the use of Canva-based learning videos in science lessons significantly increased students' learning motivation. This improvement was reflected in all aspects of the ARCS questionnaire: attention, relevance, self-confidence, and satisfaction. The engaging visuals, easy-to-understand storylines, and interactive elements in Canva videos are thought to be key factors driving increased learning motivation, particularly in fostering student attention and relevance to the material. This finding aligns with previous research emphasizing the importance of using interactive digital media in learning. For example, Asnawati and Sutiah (2023) and Amrina *et al.* (2022) found that learning videos created with Canva increased student interest and motivation, even in subjects considered difficult or less appealing. Research by Idawati *et al.* (2022) also confirmed the effectiveness of Canva-based media for science learning at the elementary school level. Furthermore, Rahmawati and Atmojo (2021) emphasized that digital media design that considers pedagogical elements is highly influential in improving students' affective aspects.

The use of digital media such as Canva is very helpful in bridging abstract concepts into more concrete and easier to understand, as expressed by Agung *et al.* (2024) and Purnomo *et al.* (2025). Teachers also gain practical benefits because Canva offers the ease of creating media without requiring high technical expertise or high costs (Fahry & Miswaty, 2025; Wicaksono & Adriana, 2023). This opens up opportunities for teachers to deliver more adaptive, creative, and tailored learning to the diverse needs of students (Sofyani *et al.*, 2024). However, this study has several limitations. The relatively short duration of the intervention (four weeks) and the limited scope of the study to a single subject and a specific educational level require caution in generalizing the study results. Future research could expand the timeframe, explore the impact across different subjects, and incorporate other variables such as gender, prior knowledge, or students' digital literacy (Nur Anissa & Limbong, 2024; Irawan & Napitupulu, 2022; Utami, 2022). The research findings strengthen empirical evidence that Canva-based video learning is an effective strategy for increasing student learning motivation. Integrating digital media designed with pedagogical principles into classroom learning practices is not only relevant to the needs of digital-era learning but also paves the way for more meaningful, inclusive, and motivating learning experiences for students.

## Conclusion

This study set out to investigate the effect of Canva-based video instruction on students' learning motivation in the IPAS subject at the junior high school level. Based on the analysis of both descriptive and inferential statistics, the findings revealed that the experimental group, which was taught using Canva-designed educational videos, showed a significantly higher increase in learning motivation compared to the control group that received conventional instruction. The results confirmed that the integration of visually engaging and interactive media such as Canva not only captures student attention but also enhances perceived relevance, builds confidence, and improves overall satisfaction in learning—key components of the ARCS motivation model. The statistically significant differences in pre- and post-test scores, supported by a large effect size, underscore the effectiveness of Canva-based video instruction in fostering student motivation. This research contributes to the growing body of literature emphasizing the role of digital learning tools in enhancing educational engagement. From a practical standpoint, the use of Canva represents an accessible and adaptable instructional strategy that teachers can employ to improve the quality of learning experiences, especially in subjects like IPAS that benefit from contextual visualization. However, this study has certain limitations. It was conducted over a limited time frame and within a specific context, using a relatively small sample size. The study focused solely on motivational outcomes without examining long-term retention, academic achievement, or behavioral engagement. Future research should consider longitudinal studies across different educational levels and subject areas, and investigate the interplay between digital tool usage and individual learner characteristics such as digital literacy, cognitive style, or socio-emotional factors. Canva-based educational videos have a positive and significant impact on students' learning motivation. Their application in classrooms opens new possibilities for improving teaching practices through creative and student-centered digital pedagogy. Further explorations are needed to deepen understanding of how such tools influence broader educational outcomes.



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