JIPSINDO (Jurnal Pendidikan Ilmu Pengetahuan Indonesia)
ISSN: 2355-0139 (p); 2615-7594 (e)
Vol. 13. No. 1 (2026), pp. 63-74, DOI: https://doi.org/10.21831/jipsindo.v13i1.90934

The Effect of Video-Based Learning Media on Social Studies Learning Outcomes
by

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Article History
Submitted: November 28, 2025
Revised: March 31, 2026
Accepted: March 31, 2026

Keywords:
learning outcomes; video-based learning media; social studies; pre-experimental design

Abstract

This study was motivated by the low Social Studies learning outcomes of Grade IX students at SMPN X di Gunung Bintang Awai, where 40% of students failed to meet the minimum mastery criteria (KKM) due to monotonous, lecture-dominated teaching methods. This study aimed to examine the effect of video-based learning media, integrated with structured discussion and interactive quizzes, on students' Social Studies learning outcomes. A pre-experimental one-group pretest-posttest design was employed, involving 28 students (12 male, 16 female) selected through total sampling. The intervention was implemented over five months (March–July 2025) and combined video-based instructional media with structured group discussions using guided worksheets (Lembar Kerja Peserta Didik) and interactive gamified quizzes. Learning outcomes were measured using a cognitive achievement test administered before (pretest) and after (posttest) the intervention. Data were analyzed using a chi-square test of association to examine the difference in classical completeness proportions between the two measurements. Results showed that the proportion of students achieving learning completeness increased significantly from 35.7% at pretest to 92.8% at posttest, $\chi^2(1) = 17.50$, $p < .001$, with a large effect size ($\varphi = 0.60$). These findings indicate that video-based learning media, when embedded within an active pedagogical design, significantly improves cognitive learning outcomes. However, because instructional components were introduced progressively within a single group and no control group was included, causal attribution to video media in isolation should be interpreted with caution. Further quasi-experimental research incorporating a control group is recommended to confirm these findings.

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Introduction

Improving the quality of the learning process plays a fundamental role in education (Janah & Salamah, 2022). Social Sciences (Ilmu Pengetahuan Sosial) is an interdisciplinary field of study that examines social phenomena and problems from various aspects of human life (Nurhaniah, 2023a, 2023b; Nurjanah et al., 2021). Ideally, it should be taught in a dynamic and interactive manner, supported by methods capable of making abstract material more concrete and relevant for learners (Fauziah et al., 2022), with the goal of achieving learning outcomes that exceed the minimum completeness criteria (Kriteria Ketuntasan Minimal).

Although the objectives of the Social Studies curriculum are ideal, the reality in the field often reveals significant gaps. Students are frequently observed to be bored, uninspired, and lacking enthusiasm during the learning process (Purwanti & Puspitasari, 2021). This monotonous and uninteresting classroom atmosphere directly hinders the transfer of knowledge and contributes to low achievement of learning outcomes. The gap between curriculum objectives and low student engagement represents a fundamental pedagogical problem that must be addressed (Cui et al., 2021; Fadli et al., 2025). This problem was evident among Grade IX students at SMPN X Gunung Bintang Awai, where quantitative data showed that 40% of students did not meet the KKM in the previous school year, indicating a systemic and persistent issue.

Based on in-depth observation, the root cause of students' low learning outcomes can be traced to the teacher's role as the main designer of classroom learning at SMPN X Gunung Bintang Awai. The teaching and learning process remained dominated by conventional, one-way lecture methods. Teachers rarely varied their methods or made use of engaging learning media for Social Studies material, which is often abstract in nature. The absence of strategies utilizing more modern learning media, such as audiovisual tools, was a key factor contributing to the ineffectiveness of the learning process. As a result, students became passive listeners whose interest in learning was not stimulated, ultimately affecting their classroom attitudes and behavior — often appearing saturated, bored, or even sleepy — with a direct impact on their ability to achieve optimal learning outcomes.

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To address these complex problems, an innovation in the learning process was needed. This study proposes video-based learning media as a potential solution. This medium is an audiovisual type that effectively combines sound elements with moving images (Manurung et al., 2025; Purwaningsih & Anggraeni, 2021). The synergy between hearing and sight is able to create a much richer and more engaging learning experience (Sari et al., 2019). Video's ability to present information, illustrate processes, and explain complex concepts visually offers an appeal that lecture-based methods lack (Puriningsih et al., 2025), and is therefore expected to significantly increase student motivation.

Video offers several advantages as an effective learning medium, particularly in contexts requiring visualization or simulation. One of its main strengths is its ability to explain abstract concepts through moving images, text, narration, and sound, making content easier for students to understand and remember. Video provides a more concrete and communicative learning experience, as students are not only reading or listening but also seeing real situations or processes in visual form. It can further enhance learning motivation, as content that is engaging both visually and aurally tends to sustain students' attention longer than traditional lectures. The use of video in learning has also been shown to increase student engagement, as students feel more interested and willing to follow the material through to completion.

However, video as a learning medium also has certain limitations. One drawback is its lack of interactivity: video is generally one-directional, meaning students act as passive recipients of information without the opportunity to ask questions or interact with the material. Producing video also requires considerable time and resources; compared to printed materials or simple presentations, video production involves scripting, filming, editing, and content validation before it can be used effectively. Additionally, without regular updates, video content can become outdated, particularly in rapidly evolving fields.

Given these considerations, this study aims to examine the effect of video-based learning media — implemented as an integrated instructional package combining video, structured discussion, and interactive quizzes — on the Social Studies learning outcomes of Grade IX students at SMPN X Gunung Bintang Awai. The following hypotheses were tested:

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H0: There is no significant difference in students' Social Studies learning completeness between the pretest and posttest.

H1: There is a significant difference in students' Social Studies learning completeness between the pretest and posttest.

Method

This study employed a quantitative approach using a pre-experimental one-group pretest-posttest design, aimed at examining the effect of video-based learning media on the Social Studies learning outcomes of students in Class IX of SMPN X Gunung Bintang Awai. In this design, a single group of participants was measured before (O1) and after (O2) receiving the treatment (X), without a comparison group, following the notation O1 → X → O2.

The participants consisted of 28 students (12 male, 16 female) in Class IX, selected through total sampling because the study was conducted within a single intact class. The researcher acted as the practitioner implementing the treatment, while the subject teacher served as a collaborator and observer. The study was conducted over five months, from March to July 2025, considering that systematic scheduling is a crucial factor that can affect the quality of research results (Purwanti et al., 2025).

The independent variable in this study was the video-based learning model, operationalized as an instructional package combining video media with structured group discussion using guided worksheets (LKPD) and interactive gamified quizzes. This combined package reflects the treatment as it was actually implemented and progressively refined during the study period. The dependent variable was students' cognitive learning outcomes in Social Studies, specifically on the topic 'Indonesia from Independence to Reform' (IPS Chapter IV).

Data were collected using a cognitive achievement test administered as a pretest prior to the treatment and as a posttest at the conclusion of the treatment period, supplemented by activity observation sheets, field notes, and questionnaires to describe learner motivation, which is considered vital as intrinsic motivation is a strong predictor of learning success (Julia & Hayati, 2022). The test items were

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developed based on the lesson plan (RPP) indicators and reviewed by the subject teacher for content alignment; a formal psychometric reliability analysis was not conducted, which is acknowledged as a limitation of this study.

Quantitative data were analyzed descriptively (frequency and percentage of classical learning completeness) and inferentially using a chi-square test of association with Yates' continuity correction, to examine whether the proportion of students achieving learning completeness differed significantly between the pretest and posttest. The significance level was set at $\alpha = 0.05$, and effect size was calculated using the phi coefficient.

Results

Table 1 presents the pretest results, measured before the implementation of the video-based learning model.

Table 1. Pretest Results

No	Category	Frequency (f)	Percentage (%)
1	Complete	10	35.7%
2	Not Complete	18	64.3%
	Total	28	100%

The pretest data show that the majority of students, 18 out of 28 (64.3%), had not achieved the minimum completeness criteria (KKM) prior to treatment, confirming the low baseline level of learning outcomes reported in the Introduction.

Table 2 presents the posttest results, measured after the five-month treatment period.

Table 2. Posttest Results

No	Category	Frequency (f)	Percentage (%)
1	Complete	26	92.8%
2	Not Complete	2	7.2%
	Total	28	100%

The posttest data show a substantial improvement, with 26 out of 28 students (92.8%) achieving learning completeness, compared to only 10 students (35.7%) at pretest. Interim monitoring conducted at the midpoint of the treatment period — after

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video sessions were integrated with structured group discussion — indicated a completeness rate of 78.6%, suggesting that the improvement developed progressively over the course of the treatment rather than occurring abruptly at a single point.

To determine whether this increase was statistically significant, a chi-square test of association was conducted on the 2×2 contingency table of measurement time (pretest/posttest) by completion status (complete/not complete).

Table 3. Chi-Square Test of Association Between Measurement Time and Completion Status

Statistic	Value	df	p
Chi-square (χ^2), Yates-corrected	17.50	1	< .001
Phi coefficient (φ, effect size)	0.60	—	—

The results indicate a statistically significant association between measurement time and completion status, $\chi^2(1) = 17.50$, $p < .001$. The null hypothesis (H0) was therefore rejected, and the alternative hypothesis (H1) was accepted: there is a significant difference in students' learning completeness between the pretest and posttest. The phi coefficient ($\varphi = 0.60$) indicates a large effect size, suggesting that the treatment was strongly associated with the improvement in learning outcomes.

Discussion

The pretest results confirm the existence of a fundamental problem in the learning process, with only 35.7% of students achieving cognitive learning completeness prior to treatment. This finding indicates that the conventional, lecture-dominated teaching method previously applied had failed to effectively convey the material and support students' understanding, providing a strong empirical basis for introducing a pedagogical intervention. The selection of video-based learning media as the core of the intervention was a strategic decision grounded in the assumption that dynamic visual media can increase learners' interest and attention, an essential precondition for meaningful learning (Afrilia et al., 2022; Anwar et al., 2020).

The substantial increase in learning completeness observed at posttest (92.8%), compared to pretest (35.7%), provides strong support for the effectiveness of the

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intervention. However, the interim monitoring data (78.6% at the midpoint) offer an important nuance: the early phase of treatment, which relied primarily on video viewing, produced only a modest gain, with most students remaining in a passive-informative mode of learning (Long et al., 2023; Muin, 2024). This suggests that visually appealing learning media alone does not automatically guarantee deep understanding; students may position themselves as passive recipients of information without actively processing, analyzing, or constructing knowledge (Aspari & Andromeda, 2025; Taylor et al., 2020).

The larger gains observed as the treatment progressed align with the incorporation of structured group discussion using guided worksheets (LKPD) after each video segment. This component appears to function as an effective cognitive scaffolding mechanism, breaking down complex material into manageable parts and reducing students' cognitive load (Lenkauskaitė et al., 2020; Syukri et al., 2021). Teacher-facilitated discussion also created space for social learning, allowing students to clarify misunderstandings, exchange perspectives, and jointly construct richer understanding — consistent with constructivist learning principles, in which students are actively involved in forming their own knowledge, individually and collectively (Salsabila & Muqowim, 2024; Violla & Fernandes, 2021).

The final component of the intervention, an interactive gamified quiz administered at the end of each discussion session, likely contributed to locking in the gains observed at posttest. Beyond serving as a formative evaluation tool, the quiz functioned as a mechanism for immediate feedback and reinforcement; the light, competitive atmosphere appears to have increased students' focus and intrinsic motivation to understand the material more thoroughly (Park & Jung, 2016). This is consistent with the view that active retrieval practice helps transform short-term knowledge into longer-term memory (Strong, 2023).

Taken together, these findings suggest that the effectiveness of video-based learning media does not lie in the technology itself, but in how it is embedded within a broader instructional design. Video should not be used as a substitute for teachers or as a one-way information delivery tool (Ismail et al., 2023); rather, it functions most effectively as a stimulus that triggers active, interactive, and collaborative learning processes (Agbo et al., 2023; Cavanagh & Kiersch, 2022).

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Limitations

Several limitations should be considered when interpreting these results. First, this study used a one-group pretest-posttest design without a control or comparison group; consequently, threats to internal validity such as maturation, history, and repeated-testing effects cannot be ruled out, and the observed gain cannot be attributed to the treatment with the same confidence as would be possible in a true or quasi-experimental design with a control group. Second, because the instructional components (video, discussion, and gamified quiz) were introduced progressively within the same group rather than held constant, the specific contribution of video media in isolation from the accompanying pedagogical strategies cannot be statistically disentangled. Third, the cognitive test used as the pretest-posttest instrument was reviewed for content alignment with lesson-plan indicators but was not subjected to a formal psychometric reliability analysis. Finally, the sample was limited to a single class of 28 students in one school, which restricts the generalizability of these findings to other contexts. Future research is recommended to employ a quasi-experimental design with a non-equivalent control group, holding the treatment constant across the study period, to more rigorously isolate the effect of video-based learning media from other pedagogical components.

Conclusion

This study examined the effect of video-based learning media, integrated with structured discussion and interactive quizzes, on the Social Studies learning outcomes of Grade IX students at SMPN X Gunung Bintang Awai. Using a pre-experimental one-group pretest-posttest design, the proportion of students achieving learning completeness increased significantly from 35.7% at pretest to 92.8% at posttest, $\chi^2(1) = 17.50$, $p < .001$, with a large effect size ($\varphi = 0.60$). The null hypothesis was rejected, indicating a statistically significant difference in learning outcomes following the intervention.

These findings suggest that video-based learning media contributes most effectively to learning outcomes when embedded within an active pedagogical design that combines audiovisual exposure with structured discussion and gamified reinforcement, rather than functioning as a standalone information-delivery tool. Because this study did not include a control group and introduced its instructional

components progressively, these findings should be interpreted as preliminary evidence rather than definitive proof of a causal effect specific to video media. Future studies employing a quasi-experimental or true experimental design with a control group and a constant treatment protocol are recommended to confirm and extend these findings, and to isolate the relative contribution of each pedagogical component.

References

Afrilia, L., et al. (2022). Efektivitas media pembelajaran berbasis video animasi untuk meningkatkan motivasi belajar peserta didik kelas iv sekolah dasar. *Jurnal Cakrawala Pendas*, 8(3), 710. https://doi.org/10.31949/jcp.v8i3.2559

Agbo, F. J., et al. (2023). Examining the relationships between students' perceptions of technology, pedagogy, and cognition: The case of immersive virtual reality mini games to foster computational thinking in higher education. *Smart Learning Environments*, 10(1). https://doi.org/10.1186/s40561-023-00233-1

Anggraini, A. T., & Puspita, R. D. (2024). Perbandingan hasil belajar siswa dengan pendekatan kontruktivisme versus pendekatan tradisional dalam mata pelajaran ipa kelas vii. *SCIENCE Jurnal Inovasi Pendidikan Matematika Dan IPA*, 4(4), 538. https://doi.org/10.51878/science.v4i4.3841

Anwar, Z., et al. (2020). Development of interactive video based powerpoint media in mathematics learning. *Journal of Educational Science and Technology (EST)*, 167. https://doi.org/10.26858/est.v6i2.13179

Aspari, N. T., & Andromeda, A. (2025). Uji validitas dan praktikalitas e-chemagz berbasis chemoentrepreneurship pada materi ikatan kimia untuk meningkatkan literasi kimia peserta didik. *SCIENCE Jurnal Inovasi Pendidikan Matematika Dan IPA*, 5(3), 1235. https://doi.org/10.51878/science.v5i3.6675

Cavanagh, T. M., & Kiersch, C. E. (2022). Using commonly-available technologies to create online multimedia lessons through the application of the cognitive theory of multimedia learning. *Educational Technology Research and Development*, 71(3), 1033. https://doi.org/10.1007/s11423-022-10181-1

Cui, G., et al. (2021). Dampening effects of perceived teacher enthusiasm on class-related boredom in college students: Longitudinal mediation effects of perceived task value. *Frontiers in Psychology*, 12. https://doi.org/10.3389/fpsyg.2021.712441

Fadli, M., et al. (2025). Analisis implementasi kurikulum merdeka di madrasah aliyah darun najah: Studi kasus keselarasan pendidikan ips (ekonomi) dengan-nilai

nilai agama. *SOCIAL Jurnal Inovasi Pendidikan IPS*, 5(2). https://doi.org/10.51878/social.v5i2.6192

Fauziah, N. N., et al. (2022). Perkembangan pendidikan ips di indonesia pada tingkat sekolah dasar. *AR-RIAYAH Jurnal Pendidikan Dasar*, 6(1), 89. https://doi.org/10.29240/jpd.v6i1.4359

Ismail, M., et al. (2023). Integration of technological pedagogical and content knowledge in 21st century learning. *Jurnal Penelitian Pendidikan IPA*, 9(5), 2363. https://doi.org/10.29303/jppipa.v9i5.3732

Janah, M., & Salamah, S. (2022). Upaya meningkatkan prestasi belajar ips dengan model science technology society peserta didik kelas viii b smp trisula ngluwar kabupaten magelang. *Proceedings Series on Social Sciences & Humanities*, 3, 294. https://doi.org/10.30595/pssh.v3i.393

Julia, A. P., & Hayati, F. (2022). Pengaruh motivasi terhadap hasil dan prestasi belajar mahasiswa. *JAS-PT (Jurnal Analisis Sistem Pendidikan Tinggi Indonesia)*, 6(2), 117. https://doi.org/10.36339/jaspt.v6i2.720

Lenkauskaitė, J., et al. (2020). Students' social construction of knowledge through cooperative learning. *Sustainability*, 12(22), 9606. https://doi.org/10.3390/su12229606

Long, O. A. H. O., et al. (2023). A review on the use of video in education: Advantages and disadvantages. *Innovative Teaching and Learning Journal*, 7(2), 25. https://doi.org/10.11113/itlj.v7.132

Manurung, E. S., et al. (2025). Pengaruh media video animansi powtoon berbasis kearifan lokal terhadap hasil belajaran ipas kelas iv sekolah dasar. *SOCIAL Jurnal Inovasi Pendidikan IPS*, 5(2), 712. https://doi.org/10.51878/social.v5i2.5957

Muin, M. (2024). Penggunaan video pembelajaran untuk meningkatkan hasil belajar materi pembagian siswa kelas iv sdn 14 semperiuk. *SCIENCE Jurnal Inovasi Pendidikan Matematika Dan IPA*, 3(4), 202. https://doi.org/10.51878/science.v3i4.2640

Nurhaniah, N. (2023a). Penerapan video pembelajaran untuk meningkatkan aktiivitas dan hasil belajar siswa pada materi potensi sumber daya alam dan kemaritiman indonesia kelas 7f di smp negeri 1 anggana. *SOCIAL Jurnal Inovasi Pendidikan IPS*, 3(1), 11. https://doi.org/10.51878/social.v3i1.2170

Nurhaniah, N. (2023b). Upaya meningkatkan aktivitas dan hasil belajar siswa mata pelajaran ips melalui metode index card match di kelas 7a pada smp negeri 1

anggana. *SOCIAL Jurnal Inovasi Pendidikan IPS*, 3(2), 82. https://doi.org/10.51878/social.v3i2.2488

Nurjanah, L., et al. (2021). Konsep dasar ilmu pengetahuan sosial dalam dunia pendidikan. *CHRONOLOGIA*, 3(2), 38. https://doi.org/10.22236/jhe.v3i2.7242

Park, Y., & Jung, E. (2016). Exploring the use of video-clips for motivation building in a secondary school efl setting. *English Language Teaching*, 9(10), 81. https://doi.org/10.5539/elt.v9n10p81

Puriningsih, K. R., et al. (2025). Pengembangan video pembelajaran anemia pada remaja berbasis motion graphyc. *CENDEKIA Jurnal Ilmu Pengetahuan*, 5(1), 407. https://doi.org/10.51878/cendekia.v5i1.4553

Purwanti, E., & Puspitasari, E. (2021). Persepsi guru terhadap pelaksanaan lesson study. *Prosiding Seminar Nasional Program Pengabdian Masyarakat*. https://doi.org/10.18196/ppm.21.463

Purwanti, S., et al. (2025). Peran manajerial kepala sekolah dalam mutu pembelajaran di sd negeri tonjong 01 kecamatan tonjong kabupaten brees. *LEARNING Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, 5(1), 266. https://doi.org/10.51878/learning.v5i1.4335

Purwaningsih, S. D., & Anggraeni, A. A. (2021). Developing an engaging whiteboard animation video for vitamins. *Journal of Physics Conference Series*, 2111(1), 12025. https://doi.org/10.1088/1742-6596/2111/1/012025

Salsabila, Y. R., & Muqowim, M. (2024). Korelasi antara teori belajar konstruktivisme lev vygotsky dengan model pembelajaran problem based learning (pbl). *LEARNING Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, 4(3), 813. https://doi.org/10.51878/learning.v4i3.3185

Sari, N. A., et al. (2019). Improving narrative writing skills through video media utilization in class v students of malaka jaya elementary school 07 morning. *International Journal for Educational and Vocational Studies*, 1(8), 898. https://doi.org/10.29103/ijevs.v1i8.2254

Strong, B. (2023). Retrieval, repetition, and retention: Unveiling vocabulary acquisition strategies for esl learners. *Arts & Humanities Open Access Journal*, 5(3), 185. https://doi.org/10.15406/ahoaj.2023.05.00206

Syukri, S., et al. (2021). The benefits and challenges of group discussion in syntax project. *International Journal of Transdisciplinary Knowledge*, 49. https://doi.org/10.31332/ijtk.v2i1.5

Taylor, D. B., et al. (2020). The device in the room: Technology's role in third grade literacy instruction. *Journal of Research on Technology in Education*, 52(4), 515. https://doi.org/10.1080/15391523.2020.1747577

Violla, R., & Fernandes, R. (2021). Efektivitas media pembelajaran e-booklet dalam pembelajaran daring untuk meningkatkan hasil belajar siswa pada mata pelajaran sosiologi. *Jurnal Sikola Jurnal Kajian Pendidikan Dan Pembelajaran*, 3(1), 13. https://doi.org/10.24036/sikola.v3i1.144