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Students' Perceptions on the use of Video Clips in Teaching and Learning

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ABSTRACT

This study was conducted to examine the effectiveness of using video clips as an instructional strategy in teaching and learning, particularly within the context of secondary education. The integration of multimedia, especially video-based instruction, is widely recognized as a pedagogical approach that enhances comprehension, motivation, and student engagement. The study aimed to evaluate students' perceptions of how video clips support understanding, learning experience, motivation, and instructional effectiveness. A quantitative survey using a Likert-scale questionnaire was administered to 150 secondary school students. Descriptive analysis was employed to identify frequency, percentage, and mean scores for each section of the instrument. The results show strong agreement among students regarding the use of video clips in learning. Across all twenty items, between 60% and 80% of respondents selected "Agree" or "Strongly Agree," indicating high acceptance of video-based instruction. The mean scores for the four main sections, which are understanding (M = 4.10), perception (M = 3.87), interest and motivation (M = 3.80), and teaching effectiveness (M = 3.79), produced an overall mean score of 3.89. This indicates a generally positive perception of video-based learning. Students reported that video clips improved their understanding of lesson content, helped them visualize abstract concepts more clearly, and increased their motivation and interest in learning. They also agreed that video-assisted instruction supported better memory retention, strengthened the connection between lesson content and real-life situations, and improved their ability to answer lesson-related questions. These findings confirm that video clips function as an effective pedagogical resource that aligns with current learning needs. In conclusion, this study supports the integration of video clips in instructional design to enhance comprehension, motivation, and engagement. It is recommended that video materials be combined with guided discussions, reflective activities, and application-based tasks to maximize learning impact and promote deeper understanding.

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1. Introduction

1.1 Background of Study

Rapid advancement of digital technologies has significantly transformed contemporary education, reshaping both instructional design and students' interaction with learning materials. Classrooms across the globe are increasingly influenced by technological innovations, which affect not only the delivery of information but also the ways in which learners construct understanding. Within this dynamic context, the integration of multimedia has emerged as a critical strategy for enhancing pedagogical practices. Among these formats, video clips have emerged as highly effective instructional tools, providing multimodal stimuli that engage learners visually and auditorily. Their successful integration, however, relies on the systematic development of teachers' digital literacy skills, as effective curriculum design requires educators to be prepared and competent in leveraging technology for pedagogical purposes [1]. The study further indicates that when digital literacy is effectively embedded in the curriculum, teachers are better able to select high-quality, curriculum-aligned videos, design pre- and post-viewing activities, and create guided questions that foster deeper conceptual understanding and higher-order thinking among students.

Video-based animation media provide multimodal stimuli that allow learners to process information through both visual and auditory channels, rather than relying solely on textual material. This approach enables students to observe real-life demonstrations, visualize abstract phenomena, and engage with authentic situations that are difficult to replicate in traditional classrooms. Consequently, video-based instruction can enhance students' interest and cognitive engagement while supporting the development of meaningful and durable conceptual understanding. In the context of science education, a study demonstrated that the use of animated video media in primary school science subjects significantly improved students' learning motivation and science learning outcomes compared to conventional teaching methods, highlighting its effectiveness in promoting conceptual understanding [2]. Similarly, recent studies have highlighted the positive impact of interactive video-based learning on students' conceptual understanding in primary education. The studies found that the use of interactive video media within a discovery learning model significantly enhanced students' ability to grasp complex concepts and that the class exposed to interactive video demonstrated substantially higher post-test scores than the control group, indicating that students not only engaged more deeply with the material but also translated this engagement into measurable improvements in understanding [3]. Furthermore, the statistical analysis confirmed that the interactive video-assisted discovery approach had a significant effect on students' conceptual mastery, supporting its potential as an effective pedagogical strategy.

In addition, the study reported that a multimodal learning model incorporating animated videos has led to substantial improvements in learning outcomes among Islamic primary school students [4]. Their experimental data indicated that students taught using the multimodal animation video approach achieved significantly higher learning outcome scores compared to traditional instruction, with a statistical significance value well below the conventional threshold ($p < 0.05$), suggesting the practical effectiveness of this instructional design. Moreover, the multimodal model appeared to cater to diverse learning styles by combining visual, auditory, and kinaesthetic elements, thereby enhancing overall comprehension and retention among learners. These findings collectively underscore the effectiveness of video-based instructional approaches in fostering both engagement and deep conceptual learning across diverse educational contexts. The importance of video-based learning is particularly evident in classrooms where students exhibit diverse learning preferences and readiness levels. Educational videos provide structured sequencing and narrative elements that help learners process complex information, while features such as pausing, replaying, or revisiting

segments allow students to engage with content at their own pace—opportunities seldom afforded by traditional "chalk-and-talk" methods [5]. This study further demonstrated that special rehabilitation students not only achieved significant gains in Malay sentence construction skills but also showed increased motivation and sustained engagement, indicating that constructivist video-based approaches can effectively support individualized learning and active participation.

The relevance of video-based instruction in Malaysian classrooms has grown alongside national education policy developments and a focus on digital literacy. Teachers, particularly in science and economics, increasingly integrate video clips, web-based resources, and online platforms such as YouTube, Google Slides, and PowerPoint for lesson preparation, instruction, and online assessment through tools like Google Classroom and Quizizz [6]. The study found that YouTube and other digital resources are central to lesson planning and instruction, while widespread use of online assessment tools reflects a shift toward interactive, technology-supported learning practices. These insights underscore the expanding role of digital media in teaching and assessment within the national context. Similarly, a study reported that the widespread integration of digital technologies among teachers in Kedah, suggesting that the broader shift towards technology-enhanced instruction further supports the increasing use of multimedia resources, including video clips [7]. Their large-scale survey found that over 90 % of teachers demonstrated a satisfactory level of digital technology integration, indicating a strong adoption of ICT tools in everyday teaching practice. Moreover, the study highlighted demographic and pedagogical factors that influence digital adoption, reinforcing the need for targeted professional development to sustain and deepen this technology enhanced practices.

At the national education policy level, the *Pelan Pembangunan Pendidikan Malaysia* (PPPM) 2013–2025 identifies ICT integration as a strategic priority aimed at enhancing educational quality and access [8]. Complementing this policy direction, the Digital Educational Learning Initiative Malaysia (DELIMa) provides a national virtual learning environment and a suite of digital resources—including video content—to support teaching and learning across Malaysian schools. Collectively, these empirical and policy developments underscore the growing prominence of video-based pedagogies in Malaysia. When systematically integrated into instructional planning, video clips hold transformative potential to enhance engagement, facilitate conceptual understanding, and improve overall learning outcomes across diverse classroom contexts. Building on these policy initiatives, research highlights that the effective integration of video-based pedagogies depends not only on access to technological tools but also on educators' pedagogical and digital competencies. Studies on technological pedagogical Islamic content indicate that teachers who develop both technological and pedagogical knowledge are better equipped to design lessons that leverage multimedia resources—including video clips—to enhance student engagement, foster active learning, and support deeper conceptual understanding [9]. This suggests that systematic professional development, coupled with appropriate infrastructural support, is crucial for realizing the transformative potential of video-based instruction in Malaysian classrooms.

1.2 Problem Statement

Despite the increasing accessibility of video clips in Malaysian classrooms, their pedagogical use often remains superficial and inconsistent. Teachers frequently incorporate videos into lessons, but these are often employed merely as attention-grabbing introductions or entertainment segments rather than as purposeful tools to deepen conceptual understanding or stimulate critical inquiry. This limited and unstructured usage highlights a significant gap between the potential of video clip instruction and its actual implementation in classroom practice. The effectiveness of video clip

integration is further constrained by variations in teacher readiness and digital literacy. Some educators may lack the skills needed to select high-quality, curriculum-aligned videos, develop guiding questions, or design pre- and post-viewing activities that foster meaningful learning. Others face practical constraints such as limited lesson time, insufficient technological infrastructure, or unreliable internet connectivity, all of which hinder the integration of video clips in a pedagogically sound manner. Addressing these challenges, research suggests that teaching strategies aligned with students' learning styles can enhance comprehension and motivation. For instance, when teaching techniques are tailored to Visual, Auditory, and Kinesthetic (VAK) learning styles, students demonstrate better understanding of the topic and increased learning motivation [10]. This indicates that video clips, when thoughtfully integrated to address multiple learning modalities, can move beyond superficial use and become a powerful tool for meaningful learning. Consequently, students may not fully benefit from the multimodal affordances of video clips, including visual, auditory, and interactive elements. Without careful instructional planning and guidance, videos may fail to support comprehension of complex concepts, engagement in higher-order thinking, or the development of critical skills such as analysis, evaluation, and synthesis. This may lead to missed opportunities for active learning, collaborative problem-solving, and meaningful engagement with the curriculum. Moreover, while national policies such as the *PPPM* emphasize technology-enhanced learning, empirical evidence suggests that many classrooms have yet to systematically capitalize on the pedagogical potential of digital media. The discrepancy between policy expectations and classroom realities underscores the need for a detailed investigation into current practices, teachers' instructional decisions, and the challenges they encounter in the Malaysian context. To address these gaps, this study aims to investigate how video clips can be effectively integrated into classroom practice, considering both teacher strategies and student responses. By exploring these aspects, the research intends to bridge the gap between the theoretical potential of video clip instruction and its practical application, ultimately contributing to improved learning outcomes and the advancement of 21st-century pedagogical practices in Malaysia.

1.3 Literature Review

A growing body of research demonstrates that video clip learning enhances student motivation, engagement, and comprehension. For instance, a qualitative study on moral education for Form 2 students in Malaysia found that students taught using video presentations exhibited increased interest and understanding compared to traditional teaching methods [11]. The findings suggest that video clips function not only as visual aids but also as meaningful instructional stimuli that support moral reasoning and student reflection within classroom discussions. Similarly, a study noted that technology-mediated video instruction aligns closely with PAK-21 competencies, particularly communication and collaboration [12]. This study found that students exposed to video-based lessons engaged more in peer discussions, shared ideas, and participated actively in collaborative tasks, with videos serving as a stimulus for interactive learning that fosters critical thinking and reflective dialogue. This indicates that video clips can serve as a catalyst for social interaction and learner-centered pedagogical practices that support 21st-century learning outcomes.

International research further supports these findings. Educational videos are most effective when integrated with interactive elements, such as guiding questions, discussion tasks, or prompts that encourage active reflection. In a study on physical education, students exposed to interactive video media showed increased motivation, higher engagement, and improved critical thinking skills compared to those taught using traditional methods. Passive viewing alone was found insufficient, whereas embedding interactive strategies encouraged students to actively process and apply

information, reduced cognitive overload, and facilitated deeper comprehension [13]. This study highlights the importance of instructional design in ensuring that video clips promote active cognitive processing rather than passive content consumption.

Studies also show that video clip instruction can enhance students' academic performance. ESL students in Malaysia improved academic outcomes and presentation skills when lessons were delivered via video presentations [14]. The results suggest that video clips provide contextualized language input that supports both language proficiency and learner confidence in academic communication. Similarly, junior high school students who learned geometry topics through educational videos achieved higher post-test scores, indicating enhanced conceptual understanding [15]. This finding demonstrates the effectiveness of video clips in supporting the visualization of abstract mathematical concepts and improving students' problem-solving abilities.

Video clips, when used with guiding questions, have also been shown to stimulate discussion, critical thinking, and collaborative learning [16]. This pedagogical approach emphasizes the role of teachers in scaffolding video-based instruction to encourage inquiry, reflection, and meaningful classroom interaction. Recent research continues to demonstrate the effectiveness of video clip learning across diverse contexts and skills. Animated videos have been found to enhance student engagement and learning outcomes in Indonesian secondary schools [17]. The study indicates that animated video clips can sustain learners' attention and facilitate clearer understanding of lesson content through dynamic visual representations.

In language learning contexts, animated videos support ESL learners' speaking skills by providing authentic language input and realistic communicative contexts [18]. This suggests that video clips can serve as effective models for pronunciation, intonation, and communicative competence among young learners. Additionally, vocabulary acquisition has been shown to improve when learners are exposed to multimedia input combining verbal and visual elements [19]. Their findings affirm that video clips leveraging dual-channel processing enhance retention, comprehension, and learner autonomy compared to verbal-only instructional approaches. Collectively, these studies underscore the versatile potential of video clips, which, when integrated with structured instructional strategies, can support active learning, higher-order thinking, and meaningful cognitive engagement rather than serving merely as supplementary classroom materials.

1.4 Research Objectives

This study explores the integration of video clips in teaching and learning, aiming to enhance student engagement, comprehension, and higher-order thinking. Specifically, this study investigates: i. students' responses and learning outcomes, particularly in terms of engagement, understanding of complex concepts, critical thinking, and collaboration; ii. challenges and best practices in video clip instruction, including limitations related to technology, lesson time, and the availability of high-quality, curriculum-aligned resources; iii. practical strategies to optimize the use of video clips in Malaysian classrooms. Overall, the research aims to contribute to educational practice by providing empirical evidence on how video clip learning can enhance engagement, support diverse learning preferences, foster collaboration, and encourage critical reflection, thereby advancing 21st-century teaching and learning practices.

2. Methodology

This article employs a quantitative research design using a questionnaire to examine students' perceptions and the effectiveness of video clips in the teaching and learning process. A

comprehensive literature review was also incorporated to substantiate the findings and establish a robust theoretical foundation for the pedagogical use of video clips. The study further aims to explore students' responses to the integration of video clips as an instructional medium capable of enhancing teaching effectiveness and enriching the overall learning experience.

2.1 Research Instrument

The main research instrument for this study was a structured questionnaire developed to gather quantitative data on students' perceptions of using video clips in the teaching and learning process. The questionnaire consisted of six sections that elicited information on respondents' demographic background, their understanding of the teaching method using video clips, perceptions of video usage, interest and motivation, effectiveness of learning with videos, and the suitability of the subject when videos were incorporated. All items were measured using a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree," allowing for systematic analysis of students' responses.

2.2 Research Sample

The research sample comprised secondary school students from selected schools who participated voluntarily in the study.

2.3 Data Collection Procedure

In this study, the data collection procedure was carried out in several stages to ensure the accuracy and reliability of the data obtained. The steps involved in the data collection process are illustrated in Figure 1 as below. At the initial stage, the researcher prepared a structured questionnaire based on the research objectives and the literature review. The questionnaire consisted of several sections that assessed students' perceptions, interest, motivation, effectiveness, and the suitability of using video clips in the teaching and learning sessions.

Next, the respondents selected for this study comprised 150 students from Form One to Form Five who were directly involved in teaching and learning activities using video clips. The questionnaire was distributed to the students online (via Google Forms) according to their accessibility. The researcher provided a brief explanation regarding the purpose of the study, the procedure for answering the questionnaire, and the assurance of confidentiality for all respondents involved.

Once all selected respondents had completed the questionnaire, the collected data were stored digitally before undergoing a data-cleaning process, which included checking for missing data, incomplete responses, and response consistency. When the data were ready for analysis, the researcher conducted descriptive statistical analyses such as mean (M), standard deviation (S.D), and percentage using Microsoft Excel to address each research objective.

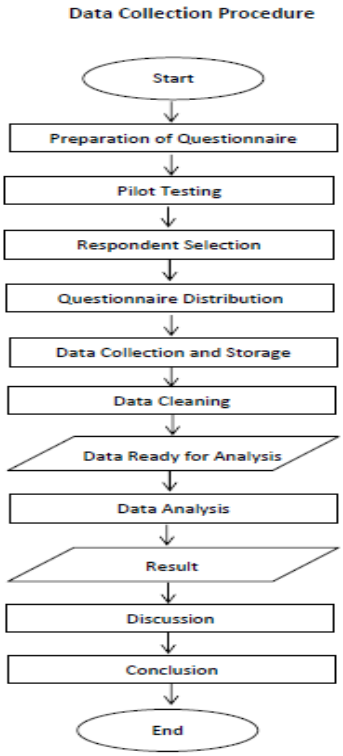

Fig. 1. Data collection procedure

3. Results

3.1 Demographic

A total of 150 students participated in this study. The demographic data of the respondents (Figure 2 to Figure 4) indicate that a majority were male (61%) and Malay (90%), with most students aged between 13 and 16 years. The gender and ethnicity imbalance suggests that the perspectives captured are primarily influenced by male Malay students. This distribution is important to consider as it may affect students' motivation, engagement, and perceptions toward video-based learning. Understanding these demographics is crucial for interpreting the study's outcomes and assessing their applicability to broader student populations.

In comparison with previous research, demographic factors have been shown to influence engagement with multimedia-based learning. Studies note that students' cultural and age backgrounds can affect both cognitive and emotional responses to video-based instruction [2]. While the current study's demographic composition aligns with these findings, the limited diversity highlights a potential area for future research: examining video-based learning across more balanced gender and ethnic groups. This could provide a more comprehensive understanding of how demographic variables interact with student engagement and learning outcomes.

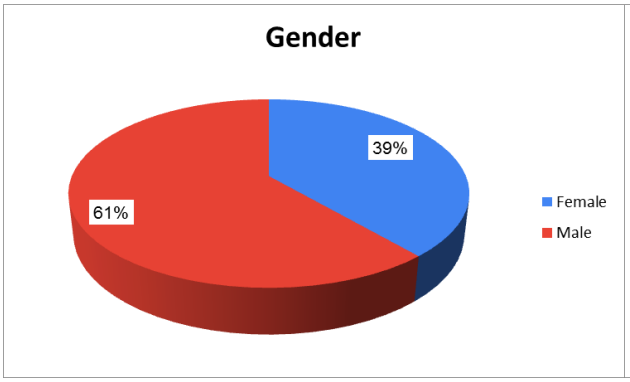

Fig. 2. Gender distribution percentage

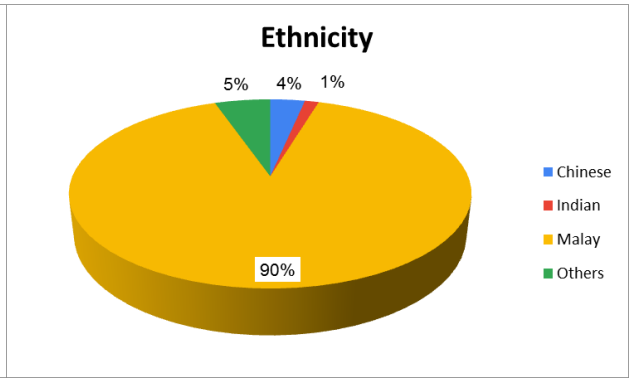

Fig. 3. Ethnicity distribution percentage

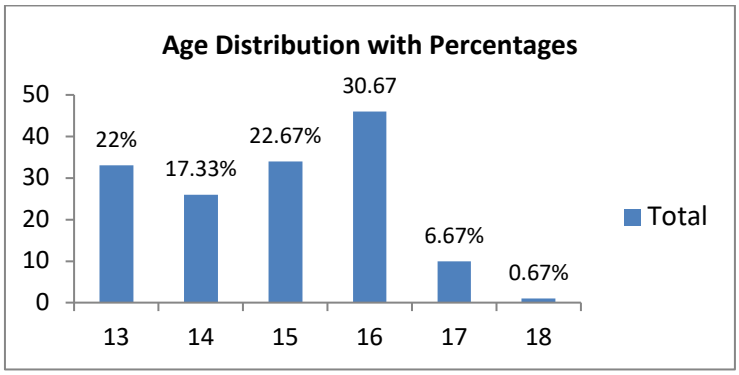

Fig. 4. Age distribution percentage

3.2 Understanding of Teaching Methods using Video Clips

Students expressed strong agreement that video clips enhance understanding of lesson content, particularly in providing concrete examples, with an overall mean score of 4.10 as shown in Table 1 below. The highest-rated item (M = 4.32) indicated that students recognized videos as effective tools for illustrating abstract concepts, such as the water cycle, experiments, and real-life examples. These findings suggest that students perceive video-based instruction as a meaningful enhancement to traditional teaching methods, facilitating clearer comprehension and retention of content.

This is supported by multiple studies emphasizing the pedagogical value of video clips. Previous study demonstrated that animated and interactive videos improve conceptual understanding in science and primary education [2,3]. The other result highlights the effectiveness of multimodal video learning in supporting cognitive processing and contextual application [4]. The further study notes that videos support scaffolding and self-paced learning, especially for students who struggle with textual materials [5]. Critically, while the results align with these studies, the current research suggests that careful instructional design including guiding questions and structured sequences is necessary to maximize comprehension, as unstructured videos may not achieve the same learning gains.

Table 1
Understanding of teaching methods using video clips

No.	Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	S. D
1	I know that video clips can show moving images and interesting sounds, which help me learn better.	1.3	4.7	20.7	38	35.3	4.01	0.93
2	I have learned a lesson by watching video clips at school.	0	4	22	36	37.3	4.06	0.88
3	The teacher uses video clips to explain the lesson in an interesting way.	2	6	15.3	32	44.7	4.11	1.01
4	I know that video clips can show real examples such as animals, the water cycle, and experiments.	0.7	4.7	12	27.3	55.3	4.32	0.91
5	I understand how video clips help me understand difficult topics.	1.3	8.7	20	30.7	30.3	3.98	1.03
	Mean Total Score						**4.10**	**0.95**

3.3 Students' Perception of the use of Video Clips

The findings reveal in Table 2 that students generally hold a positive perception of video clips in teaching with an overall mean score of 3.87. Students particularly valued how videos capture attention (M = 3.99) and enhance engagement in learning. Even the lowest-rated item, indicating enjoyment over traditional methods (M = 3.77), still reflects a favorable perception. These results suggest that video clips are widely accepted by students as an effective medium for supporting learning in the classroom.

These perceptions are consistent with research highlighting the motivational and cognitive benefits of video-based instruction. A study reported similar findings in physical education, noting that interactive videos enhance cognitive engagement [13]. Critically, the current study supports these findings but also emphasizes that positive perception alone may not ensure deep learning. This is because students may still require scaffolding, reflection prompts, or follow-up activities to achieve higher-order cognitive outcomes [16].

Table 2
Students' perception of the use of video clips

No.	Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	S. D
1	Video clips in teaching capture my attention.	2	6	21.3	36.7	34	3.99	0.93
2	Video clips help me understand the lesson more easily.	2	8	24.7	32	33.3	3.87	1.03
3	I like the way teachers use video clips in class during teaching and learning.	1.3	6.7	22.7	34.7	34.7	3.95	0.98

4	The video clips shown are easy to understand.	0.7	8.7	27.3	38.7	24.7	3.78	0.94
5	Learning through video clips is more enjoyable than traditional teaching methods.	5.3	8	27.3	23.3	36	3.77	1.17
	Mean Total Score						**3.87**	**1.01**

3.4 Interest and Motivation

Students reported that video clips increase their interest and motivation to learn, with an overall mean of 3.80. Table 3 below shows the highest score (M = 3.88) indicates a willingness to use videos again, while the lowest (M = 3.71) suggests that video clips help maintain focus during lessons. Overall, these results demonstrate that video-based learning not only attracts attention but also sustains engagement, confidence, and motivation to participate actively in learning activities.

The findings align with prior research demonstrating that multimedia instruction enhances motivation and learner engagement. A study found improvements in English as Second Language (ESL) students' academic performance and interest through video presentations, while others reported increased engagement and learning outcomes with animated videos in Indonesia [14,17]. Also, these studies show similar benefits for young ESL learners' speaking skills and highlight improved vocabulary acquisition through multimodal video input [18,19]. In addition, the students feel more confident answering questions after watching the video clips and feel that learning through these clips helps them stay focused for longer in class. Critically, while these studies confirm the motivational benefits, they also suggest that sustained learning requires carefully aligned content and interactive design, not merely passive viewing. The current study reinforces this, showing high motivation but implying the need for teacher facilitation to optimize learning.

Table 3
Interest and motivation

No.	Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	S. D
1	After watching the video clips, I am more interested in learning the topic.	0.7	8	28	37.3	26	3.8	0.94
2	Video clips make me more motivated to learn and gain more information	0.7	5.3	28.7	39.3	26	3.85	0.89
3	I would like to use video clips again in my learning.	2	6.7	24	36	31.3	3.88	0.99
4	I feel more confident to try answering questions after watching video clips.	0.7	12.7	26.7	31.3	28.7	3.75	1.03
5	Learning through video clips helps me stay focused longer in class.	3.3	7.3	32.7	28.7	28	3.71	1.06
	Mean Total Score						**3.80**	**0.98**

3.5 Effectiveness of Teaching using Video Clips

The result in Table 4 below indicates students agreed that video clips improved comprehension, memory retention, application to real-life situations, and overall learning outcomes with an overall mean of 3.79. The highest agreement (M = 3.91) was for relating lesson content to real-life scenarios, suggesting that students perceive video-based instruction as practical and relevant for applying knowledge beyond the classroom.

These results are supported by studies demonstrating that video clips enhance understanding and academic performance. The study found that videos improve conceptual understanding and knowledge retention in science and primary education [2-4]. Similarly, the others studies reported of academic gains for ESL and junior high school students [14,15]. Critically, while videos are effective, it suggested that weaker students may need additional strategies or scaffolding to achieve optimal outcomes, emphasizing the importance of differentiated instruction. Various learning styles lead some students learn more effectively through visual means, others through auditory methods, and some through a combination of several senses such as involvement, hearing and experience. Video clips are an effective learning tool and should be integrated into the teaching process, but the strategies for their use should be diversified and adapted to the needs or poor academic performance. A holistic and flexible approach is needed to maximize the benefits of video in education.

Table 4
Effectiveness of teaching using video clips

No.	Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	S. D
1	Video clips help me understand the lesson content better.	2	6.7	28.7	36.7	26	3.78	0.97
2	Teaching using video clips helps me remember information better.	0.7	10	26	40.7	22.7	3.75	0.94
3	Video clips help me relate the lesson content to real-life situations.	0.7	6	26	36.7	30.7	3.91	0.93
4	After watching the video clips, I can answer lesson questions better.	0.7	8	28	39.3	24	3.78	0.92
5	The use of video clips in teaching helps me achieve better results.	0.7	9.3	24.7	38	25.3	3.74	1.02
	Mean Total Score						**3.79**	**0.96**

3.6 Students' Assessment of the Suitability of Subjects using Video Clips

The findings indicate that students perceived Science and History as the most suitable subjects for video-based learning, followed by Science and Mathematics. This suggests that subjects requiring visualization, contextual understanding, and procedural explanation benefit most from video-based instruction, as video clips support the representation of abstract concepts and learning processes.

This finding is supported by a study who reported that science learning aligned with visual, auditory, and kinesthetic (VAK) learning styles significantly enhanced students' understanding and engagement [9]. Similarly, the other study reported that the use of video in teaching improved

students' comprehension and engagement in content that requires contextual and value-based understanding [12]. Hence, these findings indicate that the effectiveness of video clips depends on the characteristics of the subject matter, highlighting the need for purposeful and subject-specific integration of video-based instruction.

However, the researcher argues that video-based instruction is most impactful when applied to subjects that inherently demand visualization and procedural clarity, reinforcing the importance of subject-specific pedagogical considerations in technology-enhanced learning. This supports the argument that technology integration must be pedagogically aligned with subject content and learning objectives [10]. Without appropriate instructional design, video clips risk becoming supplementary rather than transformative tools.

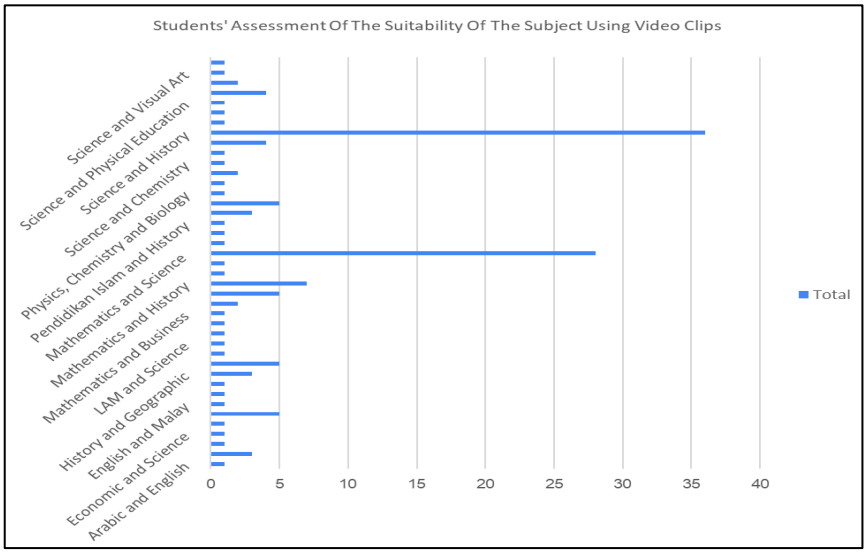

Fig. 5. Students' assessment of the suitability of subjects using video clips

4. Conclusions

In conclusion, this study unequivocally demonstrates the transformative power of integrating video clips into secondary school teaching, highlighting significant benefits in student engagement, comprehension, motivation, and overall learning outcomes. The majority of students responded positively, indicating strong acceptance of video-based learning as it enhanced understanding, facilitated mastery of complex concepts through vivid visualization, real-life examples, and stepwise demonstrations, with Science and Mathematics particularly benefiting from multimedia support. Beyond comprehension, video clips fostered sustained attention, greater interest, and increased confidence, promoting active participation and improved information retention. Students perceived video instruction as more engaging and meaningful than conventional text- or lecture-based methods, underscoring the critical role of multimedia in creating immersive, student-centered learning experiences. Importantly, video clips also supported higher-order thinking, critical reflection, and problem-solving, demonstrating that when carefully selected and structured, they are powerful tools for holistic learning. The overwhelmingly positive responses affirm the effectiveness of purposeful, structured video integration in bridging classroom gaps, enhancing lesson delivery, and promoting a 21st-century educational environment that is interactive, adaptable, and capable of nurturing essential skills such as creativity, critical thinking, and lifelong engagement.

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References

[1] MOHD, ZAID MB, ISMAIL WOAS WAN, AZMAN M. FIRDAUS, MAA ZAKARIA, and NOOR MLH MOHD. "PENERAPAN FALSAFAH PENDIDIKAN KEBANGSAAN (FPK) DAN PENDIDIKAN LITERASI DIGITAL DALAM KURIKULUM." *ASIAN PEOPLE JOURNAL Учредители: Universiti Sultan Zainal Abidin* 7, no. 1 (2024): 164-179. https://doi.org/10.37231/apj.2024.7.1.616.

[2] Caella, Lavenia Ayu, and Sigit Yulianto. "Keefektifan Media Video Animasi untuk Meningkatkan Minat Dan Hasil Belajar Mata Pelajaran IPAS Kelas IV SD Negeri Klumprit 01 Nusawungu Kabupaten Cilacap." *Jurnal Penelitian Pendidikan IPA* 10, no. 9 (2024): 6621-6630. https://doi.org/10.29303/jppipa.v10i9.8445.

[3] Nika Ayu Saputri, Kartika Yuni Purwanti, and Lisa Virdinarti Putra, "Pengaruh Model Discovery Learning Berbantuan Media Video Interaktif Terhadap Kemampuan Pemahaman Konsep Siswa SD," *Jurnal Basicedu* 8, no. 4 (July 26, 2024): 3017–25. https://doi.org/10.31004/basicedu.v8i4.8285.

[4] Gea, Sarifah Hanum, Dewi Teti Setiawati, M. Bagus Ridwan, Elvi Sukriyah, Mardianto Mardianto, and Haidir Haidir. "The Effect of the Multimodal Learning Model Using Animation Video on Islamic Elementary School Students' Learning Outcomes." *Jurnal Basicedu* 7, no. 1 (2023): 930-936. https://doi.org/10.31004/basicedu.v7i1.4699.

[5] Razali, Nor Azleenda, and Norasykin Mohd Zaid. "The Effectiveness of the Constructivism Video Approach in Self-Learning Malay Sentence Building Skills for Special Rehabilitation Students:/Keberkesanan Pembelajaran Kendiri bagi Kemahiran Membina Ayat dalam Bahasa Melayu menggunakan Video Pendekatan Konstruktivisma terhadap Murid Pemulihan Khas." *Sains Humanika* 14, no. 3-2 (2022): 45-53. https://sainshumanika.utm.my/index.php/sainshumanika/article/view/2018/990.

[6] Juhari, Nur Aina Athirah, and Zuraimi Zakaria. "Malaysian science teachers' tech-infused instruction and assessment strategies." *Asian Journal of Research in Education and Social Sciences* 6, no. 1 (2024): 162-176. https://doi.org/10.55057/ajress.2024.6.1.14.

[7] Ahmad, Nurul Shahida, and Mohan Rathakrishnan. "Digital technology integration in teaching and learning among teachers in Kedah, Malaysia." *International Journal of Instruction Technology and Social Sciences* 4 (2025): 83-94. https://doi.org/10.47577/ijitss.v4i.144.

[8] Ministry of Education Malaysia. *Laporan Tahunan Pelan Pembangunan Pendidikan Malaysia (PPPM) 2023*. Putrajaya: Ministry of Education Malaysia, 2024. ISSN 0128-0295.

[9] Hashim, Rosyafirah, W. Omar Ali Saifuddin Wan Ismail, Muhammad Nur Hakim Husin, Muhammad Rodhiuddin Rosman, Abdul Basyir Ruslam, and Muhammad Azri Wahyid. "APLIKASI PEMBELAJARAN BERASASKAN GAYA PEMBELAJARAN (VAK) BAGI SUBJEK SAINS DALAM KALANGAN PELAJAR TINGKATAN TIGA: Learning Application Based on Learning Styles VAK for Science Subjects among Students in Form Three." *Asian People Journal (APJ)* 8, no. 1 (2025): 1-12. https://doi.org/10.37231/apj.2025.8.1.451.

[10] Ab Halim, Norliza, Wan Omar Ali Saifuddin Wan Ismail, Bazuri Ab Ghani, Wan Farah Wani Wan Fakhruddin, and Sharizal Ahmad Sobri. "Technological Pedagogical Islamic Content: A Systematic Literature Study." *UMRAN-Journal of Islamic and Civilizational Studies* 12, no. 2 (2025): 99-111. https://doi.org/10.11113/umran2025.12n2.756

[11] Yahya, Sa'adatul Farhana, and Muhammad Atiullah Othman. 2022. "Penggunaan video dalam Pengajaran dan Pembelajaran Pendidikan Moral Tingkatan 2." *eJournal UPSI* 2 (2): 94–105. https://doi.org/10.37134/firdaus.vol2.2.10.2022

[12] Yahya, Sa'adatul Farhana, and Muhammad Atiullah Othman. 2023. "Penggunaan video dalam pengajaran dan pembelajaran Pendidikan Moral Tingkatan 2." *Muallim Journal of Social Sciences and Humanities* 7 (4): 167–171. https://doi.org/10.33306/mjssh/261

[13] Trisnawati, Silva Ayu, Mochamad Ridwan, Edi Setiawan, and Farruh Ahmedov. "Integrating interactive video media in physical education: A study on critical thinking and learning motivation." *Edu Sportivo: Indonesian Journal of Physical Education* 5, no. 3 (2024): 289-305. https://doi.org/10.25299/esijope.2024.vol5(3).19073

[14] Anmary, Antony Sheela, and Lubna Ali Mohammed. "The Effect of Video Presentations on Achieving Academic Performance Among ESL Students in Malaysia." *International Journal of Emerging Issues in Social Science, Arts and Humanities (IJEISSAH)* 1, no. 1 (2022): 52-56. https://doi.org/10.60072/ijeissah.2022.v1i01.005

[15] Widyaningrum, Indah, and Novi Susanti. "Educational Learning Video Improves Learning Outcomes of Junior High School Students on Beam Materials: Video Pembelajaran Edukatif Meningkatkan Hasil Belajar Materi Balok Siswa SMP." *Indonesian Journal of Innovation Studies* 26, no. 3 (2025): 10-21070. https://doi.org/10.21070/ijins.v26i3.1508

[16] Wan Ismail, W Omar Ali Saifuddin and Sulaiman, Ab. Aziz, "*Pedagogi Dalam Pendidikan"*, 1st ed. (Penerbit Universiti Sultan Zainal Abidin, Kampus Gong Badak, 2025). https://www.unisza.edu.my/bookstore/index.php?route=product/product&product_id=413.

[17] Rahayu, Novilita Dwi, Febrina Gerhani, and Shendy Andrie Wijaya. "Efektivitas Media Pembelajaran Video Animasi Untuk Meningkatkan Hasil Belajar Ditinjau Dari Minat Belajar Siswa Di SMP Al Qodiriyah Srono." *Perspektif Pendidikan dan Keguruan* 15, no. 2 (2024): 153-165. https://doi.org/10.25299/perspektif.2024.vol15(2).19167

[18] Anbalahan, Thivya, and Azlina Abdul Aziz. "The Effectiveness of Using Animated Videos in Enhancing Young ESL Learners' Speaking Skill." *AJELP: Asian Journal of English Language and Pedagogy* 12, no. 1 (2024): 54-70.https://doi.org/10.37134/ajelp.vol12.1.5.2024.

[19] Zhang, Pengchong, and Shi Zhang. "Multimedia enhanced vocabulary learning: The role of input condition and learner-related factors." *System* 122 (2024): 103275. https://doi.org/10.1016/j.system.2024.103275.