

Research Article

# A Meaningful Learning Model Based on Digital Video Integrated with Active Syntax to Enhance Students' Critical Thinking in Higher Education

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**Abstract:** General education at Islamic Religious Higher Education Institutions (PTKI) plays an important role in developing students' critical thinking skills so they can analyze religious and social issues reflectively and contextually. However, learning practices in PTKI are still dominated by teacher-centered approaches and low cognitive achievement, which limits the development of analytical, evaluative, and problem-solving abilities. Meanwhile, studies show that integrating digital media, particularly video, can improve conceptual understanding, motivation, and cognitive engagement, yet a digital video-based meaningful learning model specifically designed for the PTKI context remains limited. Therefore, this study aims to formulate a Digital Video-Based Meaningful Learning Model (MPBBVD) to enhance students' critical thinking skills. This research employed a literature review method by analyzing books, scientific articles, research reports, and digital sources related to meaningful learning, constructivism, multimedia learning, digital video use, and critical thinking development. Data were analyzed descriptively and qualitatively to identify the theoretical foundations, learning syntax, and design principles of the model. The findings indicate that MPBBVD integrates Ausubel's Meaningful Learning theory, constructivist perspectives from Piaget, Vygotsky, and Bruner, Mayer's Multimedia Learning theory, and the critical thinking framework of Facione and Ennis. The model uses digital video as the main learning medium and applies the ACTIVE stages (Attend, Connect, Think, Interpret, Verify, Evaluate) to promote contextual and interactive learning. Integrating pre-, during-, and post-video activities supports knowledge construction, reduces cognitive load, and increases student engagement, contributing theoretically and practically to improving critical thinking in PTKI in the Industrial Revolution 4.0 era.

**Keywords:** ACTIVE; Critical Thinking; Digital Video; Learning Model; Meaningful Learning.

## 1. Introduction

General education at Islamic Religious Higher Education Institutions (PTKI) plays a strategic role in shaping graduates who not only master Islamic studies but are also able to think critically, analytically, and reflectively when facing contemporary religious and social issues. The learning process at Islamic Higher Education Institutions (PTKI) requires students to deeply understand Islamic scientific concepts, analyze evidence, critique arguments, and interpret information systematically and contextually. Differences in perspective among academics and scholars often arise due to variations in analytical methodology, scientific approaches, and the diversity of interpretive perspectives, making critical thinking skills an important aspect to be developed in learning.

Theologically, the Quran and Hadith encourage the development of critical thinking skills. QS. al-A'raf:179 emphasizes the importance of using reason to understand the signs of God's greatness, rather than passively accepting information. Wahbah az-Zuhaili emphasized that this verse demands that humans analyze, question, and deeply understand reality. Prophet

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Muhammad (peace be upon him) also emphasized the importance of becoming a faqih, which means being able to comprehensively understand religious teachings, aligning with efforts to cultivate critical and reflective thinking skills in PTKI students.

However, theoretically, there is still a gap between the curriculum's demands, which require students to be able to think critically, and the learning concepts that are implemented. Educational literature indicates that learning in higher education, including Islamic higher education institutions (PTKI), still tends to be lecturer-centered, thus not fully supporting the development of analysis, argumentation, and problem-solving skills.

Various international studies such as PISA (Sukma, n.d.) also confirm that the literacy and critical thinking skills of Indonesian students are still low, which conceptually impacts the abilities of university students. The global challenges of the Industry 4.0 era (World Economic Forum, 2022) further emphasize this urgency. The World Economic Forum lists critical thinking skills as one of the most needed in the workplace and academia. Students who do not master these skills will face obstacles in problem-solving, reflective thinking, and adapting to rapid change.

Learning in some PTKIs is still dominated by a conventional approach that is teacher-centered. Analysis of the Semester Learning Plan documents shows that most learning outcomes are still at a low cognitive level (C1–C2), indicating that higher-order thinking skills (HOTS) have not been optimally developed.

This condition indicates a theoretical gap between the curriculum's demands, which require students to be able to analyze, evaluate, and solve problems, and the current teaching methods used. This confirms the need for more innovative, contextual, and interactive learning models that allow students to actively engage in the critical thinking process.

Various previous studies have developed diverse learning methods, such as Problem-Based Learning, Project-Based Learning, and conventional lecturing. The lecture model has the advantage of efficient material delivery, but it is weak in building active engagement and critical thinking skills. PBL and PjBL models have been proven to improve analytical and collaborative skills, but they require readiness in terms of facilities, time, and facilitator competence, which are not always evenly available in PTKI. Meanwhile, research on meaningful learning and the use of digital video shows that contextual media integration can improve students' conceptual understanding, learning motivation, and cognitive engagement. However, there has been no research that specifically develops a digital video-based meaningful learning model for the general learning context in Islamic Higher Education Institutions (PTKI). To address this issue, this study proposes the Digital Video-Based Meaningful Learning Model (MPBBVD), which integrates Ausubel's meaningful learning principles (Ausubel, 1963) with the visual, contextual, and interactive nature of video media. This model emphasizes the connection between new knowledge and the cognitive structures students already possess. When integrated with digital media, especially video, the learning process becomes more contextual, visual, and interactive. Digital video allows for the presentation of complex material in a more concrete way, sparking discussion and helping students connect new concepts with prior experiences, thus improving the quality of understanding and critical thinking skills. This approach is enriched by the Facione and Ennis critical thinking framework as a reference for learning achievement indicators.

Although research on meaningful learning and the use of digital video has grown in various fields, a digital video-based meaningful learning model specifically designed for general education in Islamic higher education institutions (PTKI) has not yet been found. This condition represents the novelty of the research, as it offers an innovative model that can address the critical and contextual learning needs in the Islamic higher education environment. This study aims to analyze a digital video-based meaningful learning model to improve students' critical thinking skills in PTKI, thereby bridging the gap between curriculum demands and students' actual abilities, while also addressing the global challenges of the 21st century.

## 2. Preliminaries or Related Work or Literature Review

Various previous studies have shown that digital video plays a significant role in creating meaningful learning and improving critical thinking skills. Hakkarainen et al. found that digital video in both case-based learning and PBL can increase active engagement, creativity, and analysis among students. Colasante emphasizes that interactive videos serve as a reflective medium that strengthens participation and collaboration. Other research, such as Sitingjak and Manurung, also shows that video is effective in helping to understand abstract concepts and

improving analytical skills. Additionally, the dissertations by Kurniasih, Tenriawaru, and Hapni emphasize that project-based and digital media-based meaningful learning can enhance student engagement, reflection, and learning outcomes. Nevertheless, these studies have not specifically developed a digital video-based meaningful learning model, leaving room for a more systematic, innovative, and structured model to be presented. Previous research studies have shown that digital video-based learning models are effective in increasing student engagement, understanding, and critical thinking skills. However, there is no model that specifically develops meaningful learning based on digital video. Therefore, developing a video-based meaningful learning model becomes an urgent need for this research to fill the gap in studies and present a more innovative, contextual, and relevant learning design.

### 3. Theoretical Study

**Grand Theory:** This research is based on David Ausubel's Meaningful Learning (Ausubel, 1963), which emphasizes that new knowledge will be more meaningful if it is connected to the knowledge students already possess. This theory serves as the philosophical foundation for developing learning models that emphasize meaningful understanding, the interconnectedness of concepts, and the enhancement of students' critical thinking abilities.

At the Middle Theory level, the research adopts the principles of constructivism (Jerome S. Bruner, 1977; Piaget, 1950; Vygotsky, 1978) (Piaget, 1970; Vygotsky, 1978) (Vygotsky, 1978), which emphasizes the active role of students in constructing knowledge through interaction and reflection, as well as Discovery Learning by Jerome Bruner (Jerome S. Bruner, 1977), which encourages students to explore, discover, and build understanding independently. The model structure refers to the framework of Joyce & Weil (Weil et al., 2000) with learning objectives, learning syntax, lecturer facilitation principles, social collaboration, and a support system consisting of video media, modules, and a learning forum.

Additionally, the critical thinking framework used as a guide in designing learning outcomes is a complex cognitive skill that includes analysis, evaluation, interpretation, and evidence-based conclusion drawing. According to experts such as (Ennis, 1985; Facione, 1990; Hawkins et al., 2019; Lun et al., 2023; Manurung et al., 2023; Willingham, 2007) Willingham, Supriyanto, Facione, Halpern, Paul, Elder, and Ennis, critical thinking encompasses rational abilities, information accuracy assessment, inference, self-regulation, logic, and critical disposition. This characteristic aligns with the revised Bloom's taxonomy (analyzing, evaluating, creating, metacognition), which serves as a framework for developing critical thinking skills. In meaningful learning, critical thinking skills enable students to connect prior knowledge with new information, distinguish facts from bias, and generate understanding and adaptive solutions to 21st-century challenges, which are the six operational indicators of critical thinking: clarity, accuracy, evaluation, inference, relevance, and logic.

At the Applied Theory level, this research applies the use of digital video as the primary medium in learning, designed with reference to Richard E. Mayer's theory (Mayer, 2002) on Cognitive Theory of Multimedia Learning, which emphasizes the importance of balancing verbal and visual information for effective processing in working memory. Additionally, the views of Meg Colasante and Karl Luke (Colasante, 2022; Luke, 2021) on the use of video in higher education reinforce that video can facilitate contextual, reflective, and collaborative understanding. Through the pre-during-post-video viewing strategy, students are guided to build meaningful understanding, actively discuss, and reflect on the content, so that the digital video-based meaningful learning model developed can effectively enhance students' critical thinking skills.

Learning in Islamic religious higher education aims to equip students with an understanding of basic Islamic principles, the history of scientific development, the classification of knowledge, as well as critical thinking skills and a religious-academic attitude. The material covers fundamental concepts, understanding of classical and contemporary literature, and scientific applications in a social context. The learning methods are interdisciplinary, utilizing lectures, discussions, presentations, research, and practical application, while evaluation is conducted comprehensively across cognitive, affective, and psychomotor domains. With this approach, students not only understand theory but also develop critical analysis skills, practical skills, and integrity to apply religious knowledge contextually in society.

## 4. Materials and Method

This research uses a literature review research method aimed at analyzing and understanding learning innovation thru the development of a digital video-based meaningful learning model to improve students' critical thinking skills in higher education. Data was collected by searching various literature sources such as scientific journals, books, articles, research reports, and digital references relevant to meaningful learning models, the use of digital video media, and the development of critical thinking skills in higher education. This approach allows researchers to explore the ideas, theories, and findings of experts regarding model design, the principles of meaningful learning, and the effectiveness of digital media in supporting student engagement and understanding. The analysis was conducted descriptively and qualitatively to provide an in-depth understanding of the model's basic concepts, the forms of digital video-based learning transformation, the benefits and opportunities offered, and the challenges that may be faced in its implementation. At the same time, it explains the role of this model in comprehensively enhancing students' critical thinking abilities.

## 5. Results and Discussion

### 5.1 Meaningful Learning Model Based on Digital Video

The Digital Video-Based Meaningful Learning Model is based on the view that learning is an active, social, and constructive process, where students connect new knowledge with their existing experiences and cognitive structures. Piaget emphasized that learning is a process of cognitive adaptation thru an individual's interaction with the environment, while Vygotsky added that this process is strengthened thru social interaction within the Zone of Proximal Development (ZPD). Bruner emphasizes that learning occurs when students understand the basic structure of a concept and are able to connect it with prior knowledge, thus fostering deep and applicable understanding. Gagné expanded on this perspective by emphasizing that learning encompasses changes in dispositions and capacities that develop thru experience, while Ausubel asserted that learning is meaningful when new information is integrated with existing cognitive structures. Based on the views of these figures, meaningful learning aims to develop students holistically in the cognitive, affective, and psychomotor domains, from understanding and applying information, forming values and attitudes, to mastering skills thru reflective and repetitive practice.

Meaningfulness in learning is achieved when students are able to connect new concepts with experience, organize information deeply, and apply it in real-world contexts. This process requires active engagement thru discussion, collaboration, and activities that demand critical thinking. Thus, the foundations of meaningful learning include utilizing prior knowledge as a cognitive framework, implementing active learning strategies that encourage exploration and problem-solving, and creating a learning environment that supports motivation, emotional engagement, and constructive feedback.

In the modern context, the use of digital video has become one of the most effective learning media for achieving meaningful learning. Digital video is not just moving image recordings; it has evolved to include animation, abstract concept visualization, screen recording, and interactive content that can be produced on mobile devices. According to Mayer's multimedia theory, the combination of text, sound, images, and animation enhances understanding by activating dual cognitive processes. In line with this, digital video supports cognitive theory because it helps learners connect new information with prior knowledge, and it also supports constructivist theory because it stimulates active interaction, discussion, reflection, and the application of knowledge in real-life situations. Digital video also provides flexibility for students to review material as needed, accelerate understanding of difficult concepts, and see the relevance of the material concretely thru vivid visualization.

Thus, the Digital Video-Based Meaningful Learning Model is an integrative approach that combines constructivist principles, Ausubel's subsumption theory, active learning, and multimedia technology to create a deep, contextual, and sustainable learning experience. The use of digital video enriches the learning process by clarifying complex concepts, increasing motivation, and providing opportunities for students to become active, creative, and reflective learners. This approach not only helps students understand the material comprehensively but also fosters critical thinking skills, a positive attitude, and practical skills relevant for facing real-life challenges.

Previous studies have emphasized the urgency of developing a Digital Video-Based Meaningful Learning (DVML) model for education. Ritonga (Ritonga, 2021) shows that the constructivism model makes students more capable of connecting material to social and

religious contexts thru active discussion and interpretation. Marzuki (Marzuki & Haq, 2018) emphasizes that integrative learning, which connects text, context, and social application, is capable of fostering critical thinking and moral awareness. These findings serve as the basis for the idea that digital video should be used not only as an information provider, but also as a catalyst for critical analysis, reflection, and discussion.

The development of this model also emphasizes the importance of stakeholder involvement. Nadlir (Nadlir et al., 2024) found that the active participation of lecturers, students, and institutions enhances the successful implementation of ICT-based learning. Jeilani et al. (Jeilani & Abubakar, 2025) emphasize that institutional support influences students' readiness for digital learning, while Sitti Sapiyah et al. (Sapiyah et al., 2025) demonstrate the effectiveness of multi-stakeholder collaboration in implementing digital education. On the other hand, Sweller & Clark (Clark & Paivio, 1991; Sweller, 1988) cautioned against the risks of uncoordinated implementation and the potential cognitive load if digital media is not well-designed. Bandura (Bandura, 1978) also highlighted that asynchronous collaboration can hinder learning effectiveness.

Compared to previous research that tended to emphasize affective aspects such as motivation or character (Sagala & Muh Wasith Achadi, 2021), this study offers a different contribution by focusing on the formation of religious critical awareness thru contextual analysis. Some previous studies used digital media functionally, such as WhatsApp (Tajuddin & Syafi'i, 2021), while this study positions video as an epistemological medium that influences how people think about and understand religious texts.

The development of lesson plans in MPBVD is supported by the findings of Hakkarainen, Saarelainen, & Ruokamo (Hakkarainen et al., 2007) that case-based videos enhance active engagement and deep understanding. Mayer (Mayer, 2002) supports the use of multimedia for visual-audio processing that enriches learning, while Zhang (Zhang et al., 2006) emphasizes the importance of pre-during-post video cycles to maximize reflection. Challenges such as the risk of passive learning (Twining, 2002) and cognitive overload (Clark & Paivio, 1991; Sweller, 1988) are addressed thru structured and directed RPS design.

The pre-test and post-test evaluation instruments designed according to Bloom's revised HOTS theory are supported by research by Hakkarainen et al. (Hakkarainen et al., 2007), Laili Ulviah (Ulviah, 2024), and the principles of authentic assessment. Evaluation not only assesses mastery of the material but also students' critical thinking processes thru analysis, reflection, and contextual application. Despite warnings about the potential for less effective video use, this model addresses it thru targeted integrative assessments.

Overall, MPBVD is designed holistically by integrating Meaningful Learning theory, constructivism, and Multimedia Learning. Diverse previous research reinforces the relevance of this model while also highlighting the challenges successfully addressed thru active, reflective, and contextual learning design. This model contributes to improving students' critical thinking abilities and strengthening the connection between academic theory and real-life realities.

## 5.2 Learning Steps for ACTIVE in the Video-Based Meaningful Learning Model

The Meaningful Learning Model based on Digital Video developed in this study integrates the ACTIVE steps (Attend, Connect, Think, Interpret, Verify, Evaluate) as the main syntax to foster interactive learning and critical thinking development. In the Attend stage, students are focused on carefully watching the video; the Connect stage encourages them to link new information with prior knowledge according to the principle of meaningful learning; the Think stage invites students to analyze and evaluate the video content; the Interpret stage guides students to interpret the meaning of the material theoretically and contextually; the Verify stage ensures students check the validity of the information thru discussion or scientific references; and the Evaluate stage facilitates reflection on the learning process.

The use of digital video within the ACTIVE framework provides a more concrete, flexible, and knowledge-construction-oriented learning experience, thereby enhancing students' deep understanding and cognitive engagement. The main novelty of this model lies in the integration between Ausubel's meaningful learning principles, the strategy of using structured digital videos (pre-viewing, during-viewing, and post-viewing), and the ACTIVE syntax explicitly designed to improve critical thinking indicators. With this approach, the resulting model not only enriches the theory of meaningful learning but also offers practical innovations for higher education by emphasizing analytical, reflective, and verificative processes relevant to the demands of 21st-century competencies.

The application of the ACTIVE Model aligns with the findings of Tajuddin & Syafi'i (Tajuddin & Syafi'i, 2021), which indicate that the use of video and active learning can improve students' understanding and engagement. The Attend and Connect stages have proven effective in encouraging students to connect new knowledge with prior knowledge, thereby increasing motivation and conceptual understanding. During the Think and Interpret stages, students are trained to critically analyze and interpret the material, which aligns with Hasanah Sagala's research (Sagala & Muh Wasith Achadi, 2021) emphasizing that video-based learning strengthens critical thinking skills and deep reflection. Rahmatullah & Basrowi's research (Rahmatullah & Basrowi, 2023) also supports the importance of formative and authentic assessment (Verify and Evaluate) in digital learning to ensure practical and contextual understanding. Overall, integrating the ACTIVE stages in digital video-based meaningful learning strengthens students' cognitive, affective, and metacognitive aspects, while also reaffirming empirical evidence that digital video effectively improves the quality of learning in higher education.

### 5.3 Critical Thinking Skills

Critical thinking is a dynamic mental process that involves the ability to objectively analyze, evaluate, interpret, and draw conclusions in order to make rational decisions. Experts such as Solso, Suriasumantri, Willingham, Alberth, Facione, Ennis, and Halpern emphasize that critical thinking is not just about receiving information, but about processing it deeply by considering evidence, logic, and various perspectives. Its main characteristics include analysis, evaluation, inference, explanation, and self-regulation, which align with cognitive development in Bloom's Revised Taxonomy. Based on a synthesis of these theories, this study establishes six operational indicators of critical thinking: clarity, accuracy, evaluation, inference, relevance, and logic, which are considered most relevant for measuring students' reasoning processes, especially within a field of study that demands analytical precision.

Thus, critical thinking is positioned as a core skill that needs to be developed through meaningful digital video-based learning to enhance students' ability to understand information in depth, objectively evaluate evidence, and build a more mature scientific understanding.

Previous studies consistently confirm that the use of digital video and active learning models significantly impacts the improvement of students' critical thinking skills. Tajuddin & Syafi'i (Tajuddin & Syafi'i, 2021) show that using video in Attend-Connect activities can improve understanding and encourage students to connect new information with prior knowledge as a basis for critical thinking. This finding is supported by Hasanah Sagala's research (Sagala & Muh Wasith Achadi, 2021), which states that video is capable of facilitating in-depth analysis, reflection, and interpretation, which are at the core of critical thinking skills.

Rahmatullah & Basrowi's research (Rahmatullah & Basrowi, 2023) emphasizes the importance of authentic and formative assessment (Verify-Evaluate) to encourage students to assess, examine, and apply concepts contextually, which are key critical thinking competencies. Handayani et al. (Handayani et al., 2024) also showed that interactive digital media strengthens analytical, collaborative, and metacognitive abilities that are closely related to high-level critical thinking processes.

Some other studies highlight the challenges. Dinata found that students' digital literacy still focuses on functional aspects, so critical thinking skills are not yet optimal. Meanwhile, Permana et al. (Permana et al., 2024) showed that the success of critical thinking is highly influenced by pedagogical design and learning context, not just the digital media itself. Colasante (Colasante, 2022) and Zhang et al. (Zhang et al., 2006) remind us that video does not automatically enhance critical thinking skills without pedagogical strategies that encourage analysis and reflection.

In the context of the role of lecturers, Rudini, Hakkarainen, Mahardika, and Maulana (Hakkarainen et al., 2007; Mahardika et al., 2024; Maulana et al., 2022; Rudini, 2022) agree that video is only effective in improving critical thinking if it is integrated with learning strategies that stimulate problem-solving, discussion, and reflection. Afrida, Lestari, and Gusrizal (Faradilla et al., n.d.; Gusrizal et al., 2024; Yanis, 2024) also show that lecturers' mastery of the material and creativity have a significant impact on students' ability to critically analyze, evaluate, and interpret information.

Thus, previous research confirms that improving critical thinking skills through digital video is highly dependent on: 1. Active learning design, 2. Authentic assessment, 3. Creativity and pedagogical competence of lecturers, 4. Digital literacy and student self-directed learning, 5. Social and collaborative interaction in learning. All these findings strengthen the foundation

that digital video-based learning has great potential to build critical thinking skills if designed meaningfully, purposefully, and contextually.

#### 5.4 Components of a Meaningful Learning Model Based on Digital Video

**Table 1.** Aspects of the Model.

No.	Aspects of the Model	Brief Description
1	<b>Model Foundation</b>	1) Education is viewed as a process of forming critical, moral, and spiritual awareness to empower students to become independent and reflective learners. 2) Referring to Law No. 20 of 2003 concerning the National Education System; Basic and Secondary Education Ministerial Regulation No. 13 of 2025; Education and Culture Ministerial Regulation No. 3 of 2020. 3) Based on the theories of Meaningful Learning (Ausubel), Constructivism (Bruner), Multimedia Principles (Mayer), and Teaching Models (Joyce & Weil).
2	<b>Definition</b>	A learning model that uses interactive digital video to connect old and new knowledge, encouraging active engagement, critical thinking, reflection, and student collaboration.
3	<b>Learning Objectives / Course Learning Outcomes (CLO) &amp; Sub-CLO</b>	Improving concept mastery, critical analysis skills, text evaluation, and the practical application of knowledge. Developing cognitive, metacognitive, and affective abilities in accordance with the principles of meaningful learning.
4	<b>Model Components</b>	Including: theoretical foundation, objectives, learning syntax, reaction principles, social structure, digital support systems, materials, and evaluation. All components are integrated to promote active learning and critical thinking.
5	<b>Model Visualization</b>	Illustrated thru the ACTIVE syntax flowchart (Attend–Connect–Think–Interpret–Verify–Evaluate), which shows the relationship between the pre-, during, and post-video viewing stages.
6	<b>Syntax / Learning Steps (ACTIVE)</b>	a) Attend: Observe the video; b) Connect: Relate old and new knowledge; c) Think: Critical analysis; d) Interpret: Interpret meaning; e) Verify: Check for accuracy; f) Evaluate: Self-reflection and evaluation.
7	<b>Implementation</b>	Using a combination of face-to-face, interactive digital video, discussions, assignments, and context-based reflection on Ulumul Hadits (analysis of sanad, matan, and social context).
8	<b>Principles of Reaction, Social Structure, and Support Systems</b>	<i>Principle of Reaction: The lecturer provides responsive feedback. Social Structure: Collaborative and inclusive classes. Support System: Digital videos, interactive quizzes, teaching materials, and digital devices to support literacy and critical thinking.</i>
9	<b>Key Success Factors</b>	Influenced by the pedagogical and digital competence of lecturers, student participation, video quality, institutional support, and the integration of Islamic educational values.
10	<b>Monitoring and Evaluation (M&amp;E)</b>	This was done thru pre-tests, post-tests, quizzes, discussions, and reflections to assess the achievement of CPMK, the effectiveness of the media, and the

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development of critical and collaborative thinking skills.

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The design process began with identifying development needs, including cognitive, metacognitive, affective, social, digital, pedagogical, professional, and institutional aspects. The main goal of model development is to improve students' critical thinking skills, especially in understanding and analyzing Ulumul Hadits material.

The theoretical foundation of this learning model is based on Ausubel's Meaningful Learning theory, which emphasizes connecting new material with students' existing knowledge, as confirmed in research by Eddy Sutadji, I Wayan Utama, and Askury thru lesson study. (Eddy Sutadji, I Wayan Utama & Universitas, 2006) Additionally, Bruner's Constructivism theory also underpins active learning based on experience and interaction, which aligns with Ritonga's research (Ritonga, 2021) on CTL, demonstrating the effectiveness of linking material to real-world contexts. This model is supported by Mayer's Multimedia Learning Theory (Mayer, 2002), where digital video serves as a visual-interactive medium that enhances understanding and critical thinking. Research by Septi, Nugroho, & Saputra, Mahardika et al., and Mubarrok et al. (Mahardika et al., 2024; Septi et al., 2022; Zulfah & Mukhoiyaroh, 2022) shows that learning videos, including microlearning and interactive media, are effective in improving concept mastery, critical thinking skills, and metacognitive abilities.

The syntax of the ACTIVE Model (Attend, Connect, Think, Interpret, Verify, Evaluate) is also supported by these studies: videos are able to attract attention, connect new information with prior knowledge, encourage critical analysis, facilitate interpretation, verify understanding, and strengthen self-evaluation. Thus, the integration of theory and empirical findings confirms that digital video-based meaningful learning thru the ACTIVE Model is effective in developing students' understanding, critical thinking skills, and reflection.

Evaluation uses pre-tests, post-tests, discussions, presentations, quizzes, and reflections to measure mastery of cognitive, affective, psychomotor competencies, as well as critical thinking skills. This evaluation refers to Bloom's Taxonomy (Krathwohl, 2001) and the principles of Authentic Assessment (Wiggins, 1990), allowing students to apply their knowledge in real-world contexts.

The uniqueness of this model lies in: 1) The integration of interactive digital video with active learning to develop critical thinking skills. 2) The systematic implementation of the ACTIVE stages for cognitive, affective, social, and metacognitive engagement. 3) Holistic evaluation that measures all three domains of student competence. 4) Reinforcement of the principles of learning according to the Quran, which emphasizes critical thinking, reflection, and gradual learning (QS. Ali Imran: 190; An-Nahl: 89; An-Nahl: 125).

Expert validation led to minor improvements, including expanding student activities (case studies, quizzes, discussions), simplifying video media, increasing text contrast, improving lesson plans and learning instructions, and adjusting video duration to maintain student focus.

The design of this digital video-based meaningful learning model shows that combining modern learning theories, interactive media, and Islamic educational principles can enhance engagement, understanding, and critical thinking skills. This model offers a dynamic, interactive, reflective, and applied learning approach, while maintaining the depth of classical scientific concepts thru digital technology.

## 6. Conclusion and Suggestions

### 6.1 Conclusion

This research concludes that developing a digital video-based meaningful learning model has great potential as a relevant learning innovation in the digital age. This model has proven capable of increasing student engagement, strengthening conceptual understanding, and fostering critical thinking skills thru pre-watch, during-watch, and post-watch video strategies. Its successful implementation is highly influenced by the readiness of lecturers as facilitators, contextual media design, technological support, and a learning environment that encourages interaction, reflection, and collaboration. The transformation of learning thru the integration of meaningful learning theory, constructivism, and multimedia learning demonstrates that the use of digital video not only helps present material more clearly and attractively, but also creates a learning experience that is deep, active, and relevant to the demands of the 21st century.

## 6.2 Suggestion

It is hoped that the digital video-based meaningful learning model can continue to be developed and integrated sustainably into lectures, thereby consistently strengthening students' critical thinking abilities. Lecturers are encouraged to design videos that are contextual, encourage interaction, and provide space for reflection to deepen understanding. Educational institutions are expected to provide technological support and training for faculty so that the implementation of this model runs optimally. Thus, this research can serve as a strategic reference for the development of more innovative, meaningful, and digitally aligned higher education learning.

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