ATTA'DIB
Jurnal Pendidikan Agama Islam
p-ISSN: 2745-665X, e-ISSN: 2746-1572
Publisher By Islamic Education Study Program Faculty of Tarbiyah IAIN Bone.
Address: HOS Cokroaminoto Street, Watampone, South Sulawesi, Indonesia.
Email: attadib.iainbone@gmail.com / attadib@iain-bone.ac.id

A SYSTEMATIC REVIEW OF VISUAL INSTRUCTIONAL MATERIALS IN ISLAMIC EDUCATION: CHARACTERISTICS, CLASSIFICATION, AND COGNITIVE LOAD REDUCTION

Ahmad Hikam Mutha'aliin[1], Anisah Fitri Melania[1], Muhammad Iqbal[1], Reza Fahlefi[1], Hasan Basri[1].
[1]Universitas Islam Negeri Sunan Gunung Djati Bandung, Indonesia

Corresponding Author: Ahmad Hikam Mutha'aliin (hikamahmad95@gmail.com)

Keywords:
Visual Instructional, Islamic Education, Cognitive Load Reduction

Article History:
Received: April 13, 2026
Accepted: May 9, 2026
Published: June 7, 2026

ABSTRACT
This study addresses the pedagogical challenges in Islamic Religious Education (PAI), where abstract religious concepts are frequently taught using monotonous verbal methods or overly complex digital multimedia, leading to student cognitive overload. The research aims to synthesize the characteristics, classification, and effectiveness of purely visual instructional materials in PAI and formulate a conceptual design model based on cognitive load management. Employing a Systematic Literature Review (SLR) compliant with PRISMA 2020 guidelines, data were collected from multiple academic databases and evaluated using thematic analysis. The findings indicate that purely visual instructional materials serve as transformative pedagogical instruments, translating abstract dogmas into concrete representations and effectively minimizing extraneous cognitive load. Furthermore, these materials are taxonomically classified into four primary typologies requiring ontological alignment with specific PAI subjects: graphic media, projection media, printed visuals, and realia. Finally, the study proposes a conceptual model demonstrating that integrating high-quality graphic design with accurate religious content stimulates intrinsic motivation to learn and optimizes working memory capacity. This mechanism successfully accelerates the comprehension of complex abstract concepts while facilitating the internalization of values for students' religious character formation. Ultimately, optimizing purely visual instructional materials offers a highly focused, minimally distracting approach to enhancing PAI learning outcomes.

How to cite:
Mutha'aliin, A. H., Melania, A. F., Iqbal, M., Fahlefi, R., & Basri, H. (2026). A Systematic Review of Visual Instructional Materials in Islamic Education: Characteristics, Classification, and Cognitive Load Reduction. *Atta'dib Jurnal Pendidikan Agama Islam*, *7*(1),
DOI: https://doi.org/10.30863/attadib.v7i1.11596

INTRODUCTION

Islamic Religious Education (PAI) plays a strategic role in shaping students' character, morals, and spiritual awareness. Unlike factual-procedural subjects, most PAI materials contain abstract and reflective concepts, such as the concept of divinity in *aqidah* (creed), historical narratives in Islamic Cultural History (SKI), and the internalization of worship and moral values. Therefore, ideally, PAI instruction should not merely be oriented toward the delivery of verbal material but should also be supported by instructional materials that help students build concrete mental representations of complex religious concepts. In this context, the development of visual instructional materials is crucial because visualization can facilitate information encoding, clarify inter-conceptual relationships, and increase students' cognitive engagement in learning.

However, the reality of PAI instruction in the field still indicates a gap between ideal pedagogical demands and actual teaching practices. Many PAI learning processes are still dominated by lecturing and text-based instructional materials with minimal visualization, making learning monotonous and less appealing to students. This condition results in low motivation and engagement in learning among students and a weak conceptual understanding of PAI materials (Inayati & Mulyadi, 2023). On the other hand, the development of educational technology has also encouraged the increased use of digital media and interactive multimedia in PAI instruction, such as educational videos, Canva-based applications, audio-visual media, and e-learning-based web learning (Winarto et al., 2020). Several studies indicate that audio-visual media can significantly increase students' learning interest, participation, and learning outcomes.

Nevertheless, the dominance of multimedia approaches in PAI learning research still leaves conceptual issues that have not been extensively discussed in depth, particularly regarding the management of students' cognitive load. From the perspective of Cognitive Load Theory (CLT), the number of media elements used does not determine instructional effectiveness; rather, it is the instructional design's ability to manage students' working memory capacity optimally (Anmarkrud et al., 2019). Recent studies indicate that the use of overly complex, animation-rich, or irrelevant interactive multimedia can increase

extraneous cognitive load, which in turn hinders the processing of essential information (Yin & Sun, 2026). This is corroborated by the findings of Anmarkrud et al. (2019), who emphasized that working memory limitations are a critical factor in the success of multimedia learning.

Within the framework of the Cognitive Theory of Multimedia Learning (CTML), Mayer (2017) explains that humans process information through two primary channels—visual and verbal—each with limited capacity. Therefore, the design of instructional media must consider the principles of coherence, signaling, segmenting, and contiguity to ensure information is processed effectively without overloading students' working memory (Mayer, 2017). A meta-analysis conducted by Noetel et al. (2021) also shows that multimedia design principles aligned with cognitive theory have a significant impact on improving learning quality and reducing cognitive load (Noetel et al., 2021). Thus, the main problem in modern education lies not in the dichotomy between "traditional media versus digital media," but rather in how visual design is pedagogically managed to suit learners' cognitive capacities.

Building upon this theoretical framework, this study does not aim to reject the use of digital multimedia in PAI instruction. Instead, it seeks to reposition purely visual instructional materials as a vital component of a more focused, minimally distracting instructional design strategy. This study stems from the observation that most PAI research to date has focused on the effectiveness of audiovisual and interactive multimedia. In contrast, the exploration of purely visual instructional materials—such as infographics, graphic media, conceptual illustrations, concept maps, educational posters, illustrated print materials, and three-dimensional media—remains relatively limited. In fact, several studies have shown that simple yet structured visualizations can help clarify concepts, improve memory retention, and reduce extraneous cognitive load by applying the principles of signaling, coherence, and spatial contiguity (Castro-Alonso et al., 2021).

Consequently, the novelty of this research lies in its effort to build a conceptual synthesis among Cognitive Load Theory (CLT), the Cognitive Theory of Multimedia Learning (CTML), and the practice of developing visual instructional materials in PAI learning. Unlike previous studies that predominantly focused on the effectiveness of digital multimedia in general, this

article focuses its analysis on how purely visual instructional materials can be optimized as pedagogical instruments to aid the processing of complex religious information while reducing cognitive load. Another novelty lies in integrating general findings from multimedia research into the context of PAI instruction. This topic has rarely been systematically analyzed through a Systematic Literature Review (SLR) approach.

As an SLR-based conceptual study, this article organizes the literature into three main clusters: (1) Cognitive Load Theory and the Cognitive Theory of Multimedia Learning as the conceptual foundation; (2) empirical research on multimedia, visual design, and cognitive load management; and (3) studies on PAI instruction utilizing visual, audio-visual, and web-learning media. Based on this construct, the discussion of the article focuses on: (1) the characteristics of visual instructional materials in PAI learning; (2) the classification of visual instructional materials from a cognitive design perspective; and (3) a conceptual model of the effectiveness of visual instructional materials in reducing students' cognitive load.

Based on the background, research gap, and theoretical framework, the main objective of this article is to synthesize recent findings from the literature on the characteristics, classification, and effectiveness of visual instructional materials in PAI instruction from the perspective of contemporary cognitive theory. Furthermore, this article aims to formulate a conceptual design model for visual instructional materials that can serve as a pedagogical foundation for PAI educators in creating learning experiences that are more effective, adaptive, and aligned with the principles of managing students' cognitive load.

METHOD

This study employs a Systematic Literature Review (SLR) approach, adopting the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The SLR approach was selected because it enables the researcher to systematically and transparently identify, evaluate, and synthesize the literature on the use of visual instructional materials in Islamic Religious Education (PAI). Specifically, this is analyzed in relation to Cognitive Load Theory (CLT), the Cognitive Theory of Multimedia Learning (CTML), and visual media design based on cognitive load management.

The literature search strategy was conducted in stages across several academic databases encompassing both national and international literature, namely Google Scholar, SINTA (Science and Technology Index), and DOAJ (Directory of Open Access Journals). Additionally, supplementary searches were conducted using Consensus AI based on citations and recommendations from scientific articles. The use of Consensus AI in this study served as a literature mapping tool to identify research trends, thematic connections, and key articles related to visual design, multimedia learning, and cognitive load in educational contexts. This strategy was implemented to broaden the scope of the search, ensuring that the research is not limited solely to empirical studies in PAI but also includes theoretical foundations and meta-reviews relevant to the design of visual instructional materials.

The search process utilized a combination of keywords in Indonesian and English, including: "bahan ajar visual", "media pembelajaran PAI", "visual instructional design", "cognitive load theory", "multimedia learning", "dual coding theory", "Islamic education media", "visual learning", and "reduksi beban kognitif". These keywords were combined using Boolean operators (AND/OR) to yield broader search results while maintaining relevance to the research focus.

The retrieved articles were not immediately eliminated if they discussed multimedia or audio-visual materials; instead, they were categorized based on their theoretical and empirical relevance to visual design and cognitive load management. Consequently, this study divided the literature sources into three main categories: (1) theoretical articles on Cognitive Load Theory (CLT), the Cognitive Theory of Multimedia Learning (CTML), and instructional visual design; (2) empirical research related to multimedia learning, visual design, and cognitive load in general education; and (3) empirical research regarding the use of visual, audio-visual, and web-learning media in Islamic Religious Education (PAI).

Based on the initial search results, 20 articles that met the preliminary relevance criteria for the research focus were identified. All articles subsequently went through the stages of identification, deduplication, title and abstract screening, and full-text review in accordance with the PRISMA 2020 flow. Following an in-depth evaluation process, articles highly relevant to the study's conceptual framework were included in the final synthesis. The analyzed

literature consists of theoretical articles and meta-reviews regarding CLT and CTML, empirical studies on multimedia and cognitive load, and contextual studies on the use of visual and audio-visual media in PAI instruction.

The selected data were then analyzed using thematic analysis techniques. The analysis was conducted by identifying key patterns in the characteristics of visual instructional materials, cognitive load-based design principles, strategies for reducing extraneous cognitive load, and the effectiveness of visual media in PAI learning. The results of this synthesis were subsequently used to formulate a conceptual model for optimizing visual instructional materials in PAI learning that aligns with the principles of contemporary cognitive theory.

RESULTS AND DISCUSSION

Based on the Systematic Literature Review (SLR) of the selected studies, purely visual instructional materials have proven to play a fundamental role in instructional design. The analysis of recent literature identifies at least four primary characteristics of visual instructional materials that make them highly relevant and functional in the context of Islamic Religious Education (PAI) learning:

Central Dependence on the Sense of Sight

The most fundamental characteristic of visual instructional materials is that their messages rely entirely on students' sight (H et al., 2024). In Islamic epistemology, the use of sight as the primary instrument for acquiring knowledge and reflecting on the signs of Allah's greatness is highly encouraged. This aligns with the word of Allah SWT in the Qur'an, Surah An-Nahl, verse 78:

وَاللّٰهُ اَخْرَجَكُمْ مِّنْۢ بُطُوْنِ اُمَّهٰتِكُمْ لَا تَعْلَمُوْنَ شَيْـًٔا ۙ وَّجَعَلَ لَكُمُ السَّمْعَ وَالْاَبْصَارَ وَالْاَفْـِٕدَةَ ۙ لَعَلَّكُمْ تَشْكُرُوْنَ ﴿٧٨﴾

"And Allah has extracted you from the wombs of your mothers not knowing a thing, and He made for you hearing and vision and intellect that perhaps you would be grateful." (Q.S. An-Nahl [16]: 78).

This verse affirms that sight (*abshor*) is one of the primary blessings that facilitate the human learning process. In the context of PAI, visual stimulation through graphic design, clear typography, and aesthetically pleasing material layouts will immediately trigger students' attention toward the religious messages conveyed (Abdurahman et al., 2024).

Concretization of Complex and Abstract Materials

Islamic Religious Education is heavily laden with conceptual, historical, and abstract (unseen) materials, such as Aqidah (the pillars of faith), Islamic Cultural History (SKI), and *Fiqh* (Islamic jurisprudence) principles. An outstanding characteristic of visual instructional materials is their ability to bridge this conceptual space into a more concrete and observable form (Inayati & Mulyadi, 2023). Because the user is asking for a polished academic translation they can reuse in a manuscript, I will provide it as an editable draft. For example, the complexity of prophetic genealogies in Islamic Cultural History (Sejarah Kebudayaan Islam/SKI) can be simplified through systematically organized charts or diagrams. Likewise, the stages of the Hajj pilgrimage in Fiqh instruction can be visualized using realia, such as a miniature Kaaba and replicas of Hajj sites used in Hajj simulations. Such forms of visualization assist learners in constructing more concrete mental representations of the subject matter, thereby minimizing misconceptions and verbalism—a condition in which students are familiar with terms or concepts only at a verbal level without fully understanding their meanings and practical applications (Musliaty, 2018). This problem frequently arises when the learning process relies excessively on lecture-based instruction without adequate support from visual learning media.

Spatial and Temporal Dimensional Flexibility (Static Characteristics)

Unlike audio-visual media (such as videos), which are bound to an ongoing timeline or duration (transient information), purely visual instructional materials—such as posters, picture books, modules, and graphs—are static and permanent. This characteristic provides high flexibility for learners to process information according to their respective cognitive speeds (self-paced learning) (Nasron et al., 2024). Students can pause, re-observe an infographic on the pillars of *wudu* (ablution), or reread an image panel without the pressure of fleeting information. Thus, it highly supports independent learning both inside and outside the classroom.

Cognitive Load Reduction and Motivation Stimulation

The use of purely visual instructional materials designed according to sound visual design principles (such as color proportion, contrast, and text chunking) has been shown to reduce students' extraneous cognitive load. When

religious information is presented without overlapping auditory distractions alongside text narratives, the students' working memory becomes more focused on building schemas of understanding (Alessi, 2011). Furthermore, the visual beauty in PAI instructional materials, such as appealing Islamic ornaments and calligraphy, serves an affective function by stimulating curiosity, interest, and students' intrinsic motivation to study religious materials more deeply (Sri Wulandari et al., 2023).

Classification of Visual Instructional Materials in PAI Learning

Based on the synthesis of the reviewed literature, visual instructional materials are not a single entity but span a broad taxonomic spectrum defined by physical form, presentation method, and functionality. In the context of PAI, educators must be meticulous in selecting the type of visual media most relevant to the material's characteristics (Nasron et al., 2024). The literature analysis classifies purely visual instructional materials in PAI into four main groups:

Graphic Media (Two-Dimensional Visuals)

Graphic media are visual instructional materials that combine facts, ideas, and messages through a static amalgamation of words and images. The primary function of this media is to attract attention and illustrate the core material in a concise form (Sartika et al., 2020). In PAI learning, the use of graphic media is highly diverse, including infographic posters on daily adab (etiquette), charts to explain the lineage of the Prophets and Messengers in SKI, and graphs to illustrate the percentage distribution of inheritance (Mawaris) or the calculation of Zakat nisab. Graphic media have proven effective in condensing lengthy textual information into easily memorable visuals and in supporting students' motivation and understanding in Islamic Religious Education classes (Alfurqan & Dwi Susanti, 2021).

In the broader educational context, infographics and other graphic organizers are described as powerful tools for visualizing complex, dense information in forms that learners can quickly and easily perceive, interpret, and remember. Infographics integrate elements such as charts, diagrams, icons, and brief text to simplify long, complex content into a more comprehensible form while preserving the essential meaning (Bhat & Alyahya, 2024). Visual media

such as posters, concept maps, and graphics help concretize abstract concepts, focus students' attention, and make learned information more permanent (Ozdamli & Ozdal, 2018). A meta-analysis of 39 experimental studies found that adding graphics to text yields a moderate positive effect on reading comprehension across grade levels, especially when visuals are designed to organize and transform textual information rather than merely decorate it (Guo et al., 2020). These findings support the strategic use of graphic media in PAI as cognitively efficient tools for clarifying religious concepts, guiding independent learning, and strengthening students' retention of scriptural and jurisprudential content.

Printed Visual Instructional Materials

Although print-based, instructional materials in this category are designed to prioritize visual elements—such as typography, color, and illustration layouts—as the main pedagogical components, rather than merely as text supplements. Examples of this classification include illustrated PAI textbooks, interactive visual modules, and Student Worksheets (LKPD) featuring illustrated case studies (Abdurahman et al., 2024). The main advantage of printed visual materials is their self-instructional nature and the fact that they do not require specific technological devices to access (Inayati & Mulyadi, 2023).

Projection Media (Static Digital Visuals)

Visual projection media refers to software that displays messages on a screen using a projector or monitor. Unlike video (audio-visual) media, visual projection media focus on static presentation slides rich in visual design (Hasanah, 2020). In classroom practice, numerous studies have shown that students perceive PowerPoint-based presentations as making learning materials more structured, clearer, more engaging, and easier to understand than conventional teaching methods that rely solely on a whiteboard. The use of such media has also been associated with increased motivation to learn, active participation, and improved student competencies across various subjects, including religious education (Paramasti Ratu & Komara, 2021).

In the context of Islamic Religious Education (PAI), visual projection media can be used through color-coded slides to highlight tajweed rules in Qur'anic

verses, or schematic layouts to visualize the pillars of faith and other religious concepts. Research on the use of visual media in Islamic Religious Education indicates that PowerPoint slides and concept maps assist students in remembering learning materials more easily, focusing their attention on teachers' explanations, and participating more actively in classroom discussions (Alfurqan & Dwi Susanti, 2021).

From the perspective of Cognitive Load Theory (CLT), the use of static projection slides that emphasize graphical elements and concise text, while avoiding unnecessary audio, aligns with multimedia design principles such as coherence, signaling, and redundancy. Such a design allows the slides to function as structured visual information carriers, while the teacher's verbal explanation simultaneously occupies the auditory channel. Consequently, competition between written text and spoken information can be minimized, enabling students' working memory to focus more effectively on processing essential religious concepts rather than being distracted by excessive multimedia elements (Trypke et al., 2023).

Realia and Three-Dimensional (3D) Media

Realia or three-dimensional media is the most concrete visual form because it brings real or mock-up objects into the learning space, thereby providing students with direct observational experiences. In PAI, the use of realia media is extremely crucial for applied worship materials (*Fiqh*). A tangible example of this media is the use of a miniature Kaaba and ihram clothing for Hajj ritual simulation practices or for prayer (*shalat*) teaching aids. The use of this realia media is a concrete representation of the visual demonstration method taught by the Prophet Muhammad (PBUH) in an authentic Hadith regarding the procedures for prayer:

"Pray as you have seen me praying." (HR. Bukhari no. 631).

This Hadith explicitly emphasizes the importance of the learning process through *ru'yah* (visual observation) of a real object or figure demonstrating an act of worship. By seeing miniatures or 3D aids directly, students do not merely memorize theories. However, they can build visual constructs in their minds of worship procedures that are precise and in accordance with Islamic law (*Sharia*) (Alfurqan & Dwi Susanti, 2021).

In Fiqh instruction, the use of religious laboratory media that incorporate visual and concrete learning aids, such as miniature Kaaba models and equipment for Hajj simulations and funeral rites, has been shown to enhance students' understanding significantly. This improvement occurs because learners can directly observe and simultaneously practice the worship procedures being taught, thereby facilitating a deeper and more meaningful learning experience (Hidayah & Az-zafi, 2021)

More broadly, various forms of visual and graphic media in Islamic education, including educational comics and illustrated narratives, have been utilized to communicate complex religious messages in a more engaging and accessible manner. Such media stimulate students' imagination and support deeper cognitive processing, particularly among younger learners and those who prefer visual learning styles (Suyadi et al., 2020).

These findings further reinforce the view that graphic media in Islamic Religious Education (PAI) serve not merely as decorative elements but as cognitively efficient pedagogical tools. Graphic media play a crucial role in organizing information, clarifying complex religious concepts, and enhancing knowledge retention in students' long-term memory (Hidayah & Az-zafi, 2021).

Conceptual Model of Visual Instructional Materials in PAI

A comprehensive synthesis of various recent literature regarding the characteristics and classification of visual instructional materials culminates in a cohesive theoretical framework. Based on this Systematic Literature Review (SLR), the efficacy of purely visual instructional materials does not occur by chance, but rather through a series of structured pedagogical and psychological mechanisms. Therefore, this article proposes a conceptual (theoretical) model design that maps the causal flow between visual media design and the outputs of Islamic Religious Education (PAI) learning.

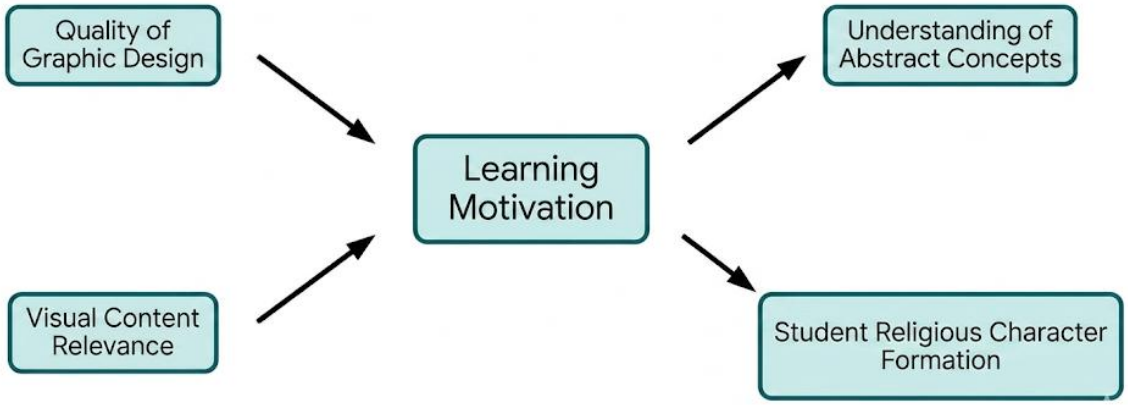

Figure 1. Conceptual Model of PAI Visual Instructional Materials

Systematically, the flow of this conceptual model can be formulated narratively as follows: Graphic Design Quality, integrated with Visual Content Relevance, will drive Learning Motivation, which ultimately leads to the Understanding of Abstract Concepts and the Formation of Students' Religious Character. The elaboration of each component within the theoretical model is as follows:

Design and Content Components

The initial stage of this model relies on two fundamental elements that must be fulfilled by educators when developing instructional materials:

a. Graphic Design Quality: Refers to the application of proper visual design principles, such as visual hierarchy, color contrast, proportional typography, and non-overlapping layouts. A structured design directly functions to balance students' working memory capacity, thereby preventing cognitive overload (Alessi, 2011).
b. Visual Content Relevance: Constitutes the substance of the Islamic materials presented. Visualizations must be theoretically grounded in the Qur'an, Hadith, or prophetic biography (sirah nabawiyah), tailored to learners' cognitive developmental level (Abdurahman et al., 2024).

Cognitive and Pedagogical Processes

a. Increased Learning Motivation and Cognitive Load Reduction: The harmonious blend between aesthetic design and relevant PAI content will

act as a catalyst for the students' psychological condition. Visual stimulation through purely visual media has been shown in the literature to eliminate boredom, focus attention, and increase students' intrinsic motivation by presenting religious materials in a "lighter," more engaging manner (Wahyudin et al., 2025).

Impact on PAI Learning

When learning motivation has been established, and cognitive load is reduced, PAI learning will reach its two primary outcomes, which are the ideal goals of Islamic education:

a. Understanding of Abstract Concepts: The achievement of knowledge transfer (cognitive aspect), where students can comprehend complex, conceptual, and unseen PAI materials (such as the pillars of faith, Hajj procession, or prophetic lineages) into a concrete and logical knowledge schema in their brains (Inayati & Mulyadi, 2023).
b. Formation of Students' Religious Character: As the pinnacle of the PAI learning hierarchy, a sound conceptual understanding driven by strong motivation will facilitate the value internalization process (affective and psychomotor aspects). The visualization of moral messages (for example, through daily etiquette posters or illustrated stories of prophetic exemplars) will settle into students' long-term memory and manifest into religious behaviors and noble characters in real life.

In conclusion, this literature synthesis affirms that purely visual instructional materials are transformative, continuous instruments. An improvement in visual quality (Stimulus) will optimize students' psychological and cognitive conditions (Process), culminating in successful academic and Islamic moral achievements (Output). The conceptual model derived from this literature review simultaneously offers a robust theoretical framework to be further developed or empirically tested in future field research.

CONCLUSION

Based on the results of the literature review and the synthesis of the discussion outlined, this study concludes three main findings that simultaneously address the research objectives regarding the analysis of visual instructional materials in Islamic Religious Education (PAI):

1. Purely visual instructional materials hold a crucial position as transformative pedagogical instruments, rather than merely decorative supplements. Their core characteristic lies in the ability to simplify PAI materials—which are generally laden with dogma and abstract concepts—into tangible, concrete representations. Substantially, this visual stimulation has been theoretically proven effective in minimizing students' cognitive overload, enabling the working memory space to process religious information more efficiently.
2. Taxonomically, visual instructional materials within the PAI ecosystem are mapped into four primary typologies: graphic media, projection media, printed visual instructional materials, and realia (three-dimensional media). This classification implies that adopting a media type requires ontological alignment with the material being taught. For example, realia media is essential for facilitating procedural *Fiqh* learning, whereas charts and chronological maps are more crucial for Islamic Cultural History (SKI) materials.
3. The success rate of visual instructional materials does not occur by chance but is structurally constructed through pedagogical and psychological mechanisms. A harmonious blend of graphic design quality (as a visual stimulus) and content relevance (Sharia accuracy) will motivate students to learn. This increase in motivation and reduction in cognitive load ultimately lead to dual learning outcomes: accelerating abstract concept comprehension while simultaneously facilitating value internalization to form students' religious character.

BIBLIOGRAPHY

Abdurahman, A., Maslani, M., & Ismail, D. S. (2024). Konsep Dasar Bahan Ajar PAI dan Perannya dalam Pembelajaran. *EDUKATIF : JURNAL ILMU PENDIDIKAN*, *6*(4). https://doi.org/10.31004/edukatif.v6i4.7162

Alessi, S. M. & S. R. T. (2011). Multimedia for Learning: Methods and Development. 3rd ed. In *Massachusetts: Allyn & Bacon*.

Alfurqan, & Dwi Susanti, M. (2021). Effectiveness of Visual Media Use in Islamic Religious Education Learning in Junior High School. *ATTANWIR: Jurnal Keislaman Dan Pendidikan*, *12*(2). https://doi.org/10.53915/jurnalkeislamandanpendidikan.v12i2.92

Anmarkrud, Ø., Andresen, A., & Bråten, I. (2019). Cognitive Load and Working Memory in Multimedia Learning: Conceptual and Measurement Issues. *Educational Psychologist*, *54*(2), 61–83. https://doi.org/10.1080/00461520.2018.1554484

Bhat, S. A., & Alyahya, S. (2024). Infographics in Educational Settings: A Literature Review. *IEEE Access*, *12*, 1633–1649. https://doi.org/10.1109/ACCESS.2023.3348083

Castro-Alonso, J. C., de Koning, B. B., Fiorella, L., & Paas, F. (2021). Five Strategies for Optimizing Instructional Materials: Instructor- and Learner-Managed Cognitive Load. *Educational Psychology Review*, *33*(4), 1379–1407. https://doi.org/10.1007/s10648-021-09606-9

Guo, D., Zhang, S., Wright, K. L., & McTigue, E. M. (2020). Do You Get the Picture? A Meta-Analysis of the Effect of Graphics on Reading Comprehension. *AERA Open*, *6*(1). https://doi.org/10.1177/2332858420901696

Hasanah, N. (2020). Pelatihan Penggunaan Aplikasi Microsoft PowerPoint sebagai Media Pembelajaran bagi Guru SD Negeri 050763 Gebang. *JURNAL PENGABDIAN KEPADA MASYARAKAT (JPKM)*, *1*(2).

Hidayah, S. N., & Az-zafi, A. (2021). The Role Of The Religious Laboratory In Improving Students 'Understanding Of Fiqh Lessons. *Tafkir: Interdisciplinary Journal of Islamic Education*, *2*(2), 157–174. https://doi.org/10.31538/tijie.v2i2.53

Inayati, M., & Mulyadi. (2023). Langkah-langkah Pengembangan Bahan Ajar PAI (Pendidikan Agama Islam). *Tematik: Jurnal Penelitian Pendidikan Dasar*, *2*(1). https://doi.org/10.57251/tem.v2i1.1082

Mayer, R. E. (2017). Using multimedia for e-learning. *Journal of Computer Assisted Learning*, *33*(5), 403–423. https://doi.org/10.1111/jcal.12197

Musliaty, M. (2018). Media Pembelajaran Visual Sejarah Kebudayaan Islam dalam Meningkatkan Minat Belajar Siswa Madrasah. *KURIOSITAS: Media Komunikasi Sosial dan Keagamaan*, *11*(1), 54–67. https://doi.org/10.35905/kur.v11i1.720

Nasron, M., Nurhasanah, H., Hidayat, S., & Yonani, S. (2024). Media Dan Desain Pembelajaran Pendidikan Agama Islam. *Innovative: Journal Of Social Science Research*, *4*(3). https://doi.org/10.31004/innovative.v4i3.11900

Noetel, M., Griffith, S., Delaney, O., Harris, N. R., Sanders, T., Parker, P. D., del Pozo Cruz, B., & Lonsdale, C. (2021). *Multimedia design for learning: An*

overview of reviews with meta-meta-analysis. https://doi.org/10.31234/osf.io/pynzr

Ozdamli, F., & Ozdal, H. (2018). Developing an Instructional Design for the Design of Infographics and the Evaluation of Infographic Usage in Teaching Based on Teacher and Student Opinions. *EURASIA Journal of Mathematics, Science and Technology Education*, *14*(4). https://doi.org/10.29333/ejmste/81868

Paramasti Ratu, R., & Komara, C. (2021). Analysis of EFL Students' Perception of PowerPoint Used As English Learning Media In The Classroom. *Ellter Journal*, *2*(1), 1–13. https://doi.org/10.22236/ellter.v2i1.5370

Sartika, F., Desriwita, E., & Ritonga, M. (2020). Pemanfaatan media pembelajaran dalam meningkatkan motivasi dan hasil belajar PAI di sekolah dan madrasah. *Humanika*, *20*(2), 115–128. https://doi.org/10.21831/hum.v20i2.32598

Sri Wulandari, Mannan, A., Romadhoni, A., & Fitriyah, E. (2023). Peranan Media Pembelajaran Audiovisual dalam Meningkatkan Minat Belajar Siswa dalam Mata Pelajaran PAI. *Rabbani: Jurnal Pendidikan Agama Islam*, *4*(1). https://doi.org/10.19105/rjpai.v4i1.7580

Suyadi, N., Z., & Fauzi, N. A. F. (2020). The fiqh of disaster: The mitigation of Covid-19 in the perspective of Islamic education-neuroscience. *International Journal of Disaster Risk Reduction*, *51*, 101848. https://doi.org/10.1016/j.ijdrr.2020.101848

Trypke, M., Stebner, F., & Wirth, J. (2023). Two types of redundancy in multimedia learning: a literature review. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1148035

Wahyudin, W., Agista, W., Lasmani, D., Yuliana, D., Achmad, P., & Garini, S. W. A. (2025). Pengembangan bahan ajar Pendidikan Agama Islam (PAI) audiovisual berbasis ICT. *Action Research Journal Indonesia (ARJI)*, *7*(4). https://doi.org/10.61227/arji.v7i4.552

Winarto, W., Syahid, A., & Saguni, F. (2020). The effectiveness of the Use of Audio-Visual Media in teaching Islamic Religious Education. *INTERNATIONAL JOURNAL OF CONTEMPORARY ISLAMIC EDUCATION*, *2*(1), 81–107. https://doi.org/10.24239/ijcied.Vol2.Iss1.14

Yin, P., & Sun, T. Y. (2026). The impact of system interaction quality on learning outcomes in online virtual experiment teaching: the mediating role of extraneous cognitive load. *Frontiers in Psychology*, *16*. https://doi.org/10.3389/fpsyg.2025.1739300