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# Digital Comics in Islamic Education: A Survey of Design and Pedagogy

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### ABSTRACT

The use of digital comic books is becoming popular in conveying educational content because of the integration of stories and illustrations. In digital comics, Islamic values and teachings may be adapted to a more contemporary and flexible form. Three such gaps are identified as follows. First, an absence of a comprehensive framework that combines the Islamic pedagogical concepts and multimedia learning theory. Second, a lack of standardization in design methodologies within the Islamic educational framework. Third and finally, the inadequate appraisal of the spiritual and ethical dimensions of learning. This literature review intends to fill these gaps by examining and synthesizing the findings of ten published studies undertaken between 2019 and 2025 that focused on the design and pedagogy of Islamic digital comics. Analysis of 10 studies (2019-2025) reveals consistent design and pedagogical patterns. 80% of the studies reviewed used the systematic instructional design models (ADDIE, 4-D, R&D) and used narrative coherence and storytelling structures. 70% used design emphasis of visuals and interfaces, 90% intentionally embedded Islamic values, and 70% of the studies had embedded interactivity through multiple forms of media. All the studies reviewed had foundations of development based on known learning theories, and of the total, 90% combined cognitive and affective learning theories with the learning of morals and character. Although the incorporation of Islamic values may be extensive, it may not be theoretically sound. Most research (90%) is descriptive or developmental in nature, which leads to little if any ability to make assertions about the effectiveness of the research. This review provides an important overview of the current research and highlights the Islamic pedagogical elements that exist in each of the studies.

## 1. Introduction

Interest in digital comics has been growing, especially with the increasing digitization of learning environments. As works of sequential art, where interactivity gives some control to the reader, and comics are presented on an interactive screen, digital comics provide a quite captivating form of visual storytelling with a flow of narrative exposition supported by multimodal. Within educational contexts, they are known for their ability to clarify complex concepts, enhance learner attention, and facilitate meaningful interactions with instructional material. Indeed, the practice is expanding

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as educators explore how digital stories, visual sequencing, and interactivity can be integrated into the curriculum to enhance learning experiences in line with current expectations for digital literacy.

Digital comic is a multimodal textual-visual form of literature, and they can be effective pedagogical tools. This innovative approach leverages mobile technology as a platform, allowing for the delivery of remediated, ergodic-hyper, and multimedia comics [1]. Comics have been used as instructional tools in various disciplines, such as chemistry, computer science, biology, physics, nanotechnology, and programming, satisfying students and deepening their engagement. Comics provide students with an easy way to access information and can motivate them, while comics creation maintains this motivation for a longer period [3]. This paper explores ways of implementing such design and pedagogical principles in the context of Islamic education. However, despite these demonstrated advantages, research has not yet systematically examined how such design and pedagogical principles should be adapted, structured, or theoretically framed specifically for Islamic educational contexts.

Despite the increasing utilization of digital comics in education to enhance comprehension and engagement, there is a lack of studies regarding their application in Islamic education. The ultimate goal of Islamic Education is not only to develop the student's cognitive abilities through learning, but also to nurture their intellectual, spiritual, and moral dimensions simultaneously through a process called *tarbiyah*. In order to fulfil this comprehensive and inclusive educational mission, Islamic educators require pedagogical tools that can deliver Islamic knowledge while developing the students' ethical character and spiritual awareness. As digital comics possess the ability to engage students through visual and story-based methods and the potential to present material using multiple modalities, there appears to be potential for them to serve as such tools.

However, the degree to which current examples of Islamic digital comics may be able to actualize this capability is unclear. This is because current research has rarely focused upon the models of design being utilized in the creation of digital comic examples of Islamic educational material, nor do they often include assessments of the methods in which current examples of educational ideas from the Islamic tradition of pedagogy, such as *tarbiyah*, *adab*, *akhlaq*, are incorporated in digital comic examples of educational material in terms of structure. The current literature mainly involves content generation or embedding moral values or other isolated aspects of the design. However, no literature has been found that interlinks various aspects like the models of instruction design, the educational philosophies of Islam, multimedia components, or learning theories.

This review will critically address these gaps through a systematic analysis. Among the ten contemporary studies (2019–2025) that examine both design and pedagogical dimensions of Islamic digital comics, the review makes four key contributions. First, it identifies and categorizes the design elements used throughout the current research, including training design methodologies (ADDIE, R&D), narrative and storytelling structures, visual and interface design principles, ways of Islamic value integration, and multimedia/interactivity features. Second, it maps how Islamic pedagogical principles, particularly holistic education, proper conduct, and moral character, are operationalized within digital comic design and delivery. Third, it reveals patterns of alignment and variation in both methodological approaches and theoretical frameworks by highlighting where the field shows consistency and where significant gaps remain. Fourth, it establishes foundation knowledge for developing a comprehensive framework that systematically integrates Islamic educational philosophy with multimedia learning theory. By synthesizing current practices and identifying their strengths and limitations, this review provides the foundation required for future framework development and methodologically strong empirical investigation.

Although previous studies have demonstrated the pedagogical promise of Islamic digital comics, the existing body of research remains highly fragmented. Most investigations concentrate on isolated

aspects such as value embedding, storyline development, or learner perceptions without establishing how Islamic pedagogical principles, instructional design models, narrative structures, visual interface elements, and multimedia features should be systematically integrated into a coherent educational framework. No prior review has mapped these components collectively or examined the degree of alignment between design decisions and Islamic educational philosophies. As a result, educators and developers lack a consolidated reference that explains how Islamic values are operationalized within digital comic design and what theoretical foundations inform these design choices.

Innovative efforts to develop digital comics for Islamic Education provide basic understandings of their educational potential. Initial researchers employed digital comics as a means of visually telling Islamic narratives in order to support total *tarbiyah* [18]. Recent analysis began assessing learners' reactions to digital comics with Islamic-themed content and found that presenting Qur'anic ethics and moral stories using multimodal formats fostered both engagement and reflection on character [14]. Despite these positive findings, substantial gaps in the literature limit the discipline from achieving its full potential. The majority of the current research focuses either on themes or storytelling, or perceptions and evaluations in terms of narrative and moral storytelling. The current research aims to overcome this shortcoming and provide an integrated perspective by covering the areas of the design process through this literature review. This aims not only to fill this gap in the current research area but also provides relevant information or guidance through its outcomes regarding the current research in the context of the design process.

## 2. Literature Review

Effective learning occurs when visual and verbal information are integrated and processed simultaneously, allowing learners to build robust cognitive models that foster deep understanding and mitigate cognitive overload. In educational contexts, digital comics serve as an excellent illustration of this principle, as they merge text, images, and narrative sequences to deliver instructional content that is both engaging and cognitively well-balanced. The multimodal approach of digital comics supports diverse learning styles and enhances student engagement, especially in subjects where contextualized narratives are beneficial [4]. These collective findings illustrate that comics are far more than mere digital distractions; they are pedagogically innovative materials that integrate motivational and cognitive processes with engagement. In this regard, digital comics as instructional materials are consistent with Mayer's Cognitive Theory of Multimedia Learning, as they convert static teaching materials into dynamic instructional content, thereby enhancing participation, understanding, and retention of knowledge across disciplines.

Comprehension levels of learners with different cognitive capacities are supported when narrative and visual elements are used together, as digital comics reformulate complex and abstract ideas in and out of the text toward a simpler and more memorable form. Over the past few years, more research about the instructional media value of digital comics has been published. For example, in remote learning, research has shown that digital comics positively impacted vocabulary retention and motivation to read in EFL learners [11]. The research showed that the visual narratives not only helped learners to comprehend the materials but also kept their attention, emotionally engaged them, and sustained cognitive load to support retention. In a related study, researchers used digital comics to present science materials about organism characteristics and found that students' literacy and conceptual understanding improved [17]. This study provided a more interactive and contextualized learning experience compared to traditional text-based resources.

Expanding the area of language and science teaching, digital comics have demonstrated their effectiveness in fostering engagement and participation in the classroom as well. These narratives

bridge the gap between students' prior knowledge and newly introduced concepts, thus fostering curiosity and motivating learners to engage in deeper collaborative discourse. In addition, research has indicated that the incorporation of visual narratives in comics is recognized as a means of enhancing creativity and multimodal expression, with scholars believing that these attributes promote the development of a positive learning attitude, particularly with the 21st-century competencies of active engagement, higher-order thinking, and media literacy within the teaching and learning processes [5]. These findings, taken collectively, illustrate that comics are more than simply digital materials for distractions, as they are pedagogically innovative materials that integrate motivational-aid cognitive processes and engagement.

Islamic education ought to embrace pedagogical innovation by incorporating contemporary teaching methods while still upholding the spirituality and moral foundations of the Islamic tradition. Contemporary classroom Islamic education pedagogy must include technology to foster the kinds of learning that promote higher-order thinking and creative problem-solving, assuming these tools are consistent with Islamic sociology and values. The combination of modern teaching methods and Islamic moral values strengthens the idea that educational technology, like learning digital comics, can be a medium for moral and intellectual growth and can be used in a manner Islamically consistent with religious obligations. This potential is illustrated through innovative uses of digital comics in Islamic education. For example, in Malaysia, a comic book was developed for primary learners that integrated Islamic values with science [15]. Many students reacted well to the comics and appreciated the spirituality of the comics. Students connected moral and spiritual elements to the scientific concepts. The research showed that it is possible to use educational Islamic comics to reinforce spiritually educational goals and objectives while also meeting curriculum goals and objectives.

The perceptions of the Islamic digital comics in Indonesia by both teachers and students were found to be that comics were effective in communicating moral value through characters and situations that people can relate to [6]. The storyline of the digital comic offered a way for learners to absorb ethical teachings more implicitly-and to avoid the use of direct preaching, which fits the prophetic model of moral cultivation. This type of digital storytelling was more likely to promote affective engagement, which in turn reinforces the recipients' absorption of the message. Islamic-themed digital media, which also includes comics, highlighted the educational relevance in promoting affective learning by integrating moral stories with practical life situations. The learners felt more emotionally attached to characters that exhibited Islamic values such as honesty, patience, and compassion. This emotional bond and behavioural imitation that followed illustrates the powerful potential digital storytelling offers within Islamic education, more importantly, the self-reflection it fosters. Overall, the studies show that digital comics can bridge the gap between the Islamic educational goals that are traditionally more static and the more dynamic expectations of contemporary teaching. Digital comics present moral teachings through engaging, visually constructed, and narratively complex stories.

A number of empirical works and theoretical publications have contributed to defining comics designed as digital instruction media. Effective educational comics must encompass the three fundamental design components of narrative coherence, visual readability, and language appropriate to the learner [2]. Narrative coherence means that the story must have a logical sequence and be meaningful in a way that the learner can understand and empathize. Visual readability means that the design, type, and spacing of information, as well as the color contrast, must be designed in a way that minimizes cognitive load. The language appropriate to the learner means that the text must be accessible, pedagogically appropriate, and match the learner's linguistic level. In Islamic comics,

these design components must be more integral because of the explicitness of the message and the accompanying moral teaching that must be observed.

A comprehensive model for assessing educational digital comics has been developed, which prioritizes two principal criteria: the comics' effectiveness in facilitating learning outcomes and their capacity to engage learners through entertainment [19]. Accessibility concerns the inclusion of various learner communities, while cultural relevance considers ethical and religious representation. In the case of Islamic digital comics, this last principle requires careful attention to the representation of characters, symbols, and themes to ensure respect for Islamic aesthetics and *adab*. Ultimately, the designers of Islamic digital comics must combine the principles of aesthetics and the cognitive functions of the materials with a moral intention. In this way, the learning materials will not just be visually appealing; they will also be ethically aligned in that they are guided by a pedagogy that is faithful to Islamic identity.

The collective analysis of the literature indicates the strength of Islamic digital comics as pedagogical tools in the consolidation of the learning materials and the enhancement of the visuals, and the incorporation of the virtues through the materials. Across the literature, five core patterns of the design and the pedagogical practices stand out. To begin with, most of the studies turned to structured instructional design models, mainly ADDIE and R&D, to achieve content organisation and alignment of the learning goals. In addition, the emphasis of the studies on the narratives and the storyboards was extremely important in the construction of the pedagogy through the carefully sequenced narratives and scenarios of the characters, which were used to facilitate understanding, enhance motivation, and reflection on the morals. Most studies focused on the visual and the layout design, which were plain and arranged in a manner that decreased the cognitive load of the learners and improved their concentration. Moreover, the incorporation of Islamic moral values through structuring the content, the moral characters, the Qur'anic themes, and the behaviours of the characters that motivates the learners to deep reflection as well as to empathy. Lastly, all studies varied in their utilization of the interactive elements, which ranged from animations to variables that improved the autonomy of the learners and drew interest to the content.

Despite these orderly trends, the literature as a whole remains inconsistent. The majority of studies address one or two elements, e.g., narrative, values integration, or learner perception, without explaining how these variables interplay within a unified theory of instruction or Islamic pedagogy. The literature has given limited attention to the integration of design with Islamic education, or to the degree to which the incorporation of multimedia aids or obstructs the attainment of moral and spiritual objectives. Consequently, although existing literature is informative, it is integrative inadequate in design, pedagogy, and the principles of education in Islam. This review is therefore an attempt to address this fragmentation by integrating the identified design practices and the pedagogical models into one cohesive analytical synthesis. The review aims to determine which elements of this synthesis are well developed, which are separated, and which are in need of further theoretical or empirical attention in order to inform a more systematic and pedagogically sound framework for Islamic education in the design of digital comics.

Based on the existing literature, five recurrent themes have been identified in Islamic digital comics. These include the application of instructional design models, the use of stories and visuals that support comprehension and encourage moral reflection, interface designs, the integration of Islamic values from multiple perspectives through the digital comic medium, and the inclusion of additional media and interactive features intended to engage the target audience, along with other comic components. The theoretical explanation of the design should not be fragmented. However, current studies often examine separate elements independently, providing limited discussion on how these components function together as a unified system. This system is based on the principles of

Islamic educational philosophy and modern educational psychology concerning media use in learning. The absence of such integrated theoretical explanations presents challenges for both digital comic creators and educators. Therefore, the purpose of the methodology is to conduct a comprehensive literature review that addresses these gaps and reduces fragmentation within the existing body of research.

### 3. Methodology

This review aims to provide insight into recent studies related to digital comic design and pedagogy. Major databases such as IEEE Explorer®, Scopus®, ScienceDirect, Wiley, and Springer-Nature were selected for data gathering. We conduct a simple assessment analysis on the related studies from published articles (journals and proceedings) between the year 2019 until 2025. Since we are focusing on the publications related to digital comic design and digital comic pedagogy, we decided to use the search keywords: (“digital comic” OR “webtoon” OR “e-comic”) AND (“Islamic education” OR “moral education” OR “religious learning” OR “value education”) AND (“design” OR “pedagogy” OR “learning framework”). Year, author name, source title, source type, study parameter, focus, gap, and findings were some of the analytical results retrieved and reviewed jointly by four researchers. The data cleaning and screening, which included deleting some duplicates, excluded documents, and others, were done together. The results indicated that 10 closely related articles were relevant studies. We discussed possible factors for classifying the articles. As a result, all articles were categorized into two classifications, and each classification has five factors.

### 3. Results and Discussion

There has been a lot of research done to examine the various aspects involved in the design and development of digital comics for Islamic education. The selected studies reviewed in the previous section focus on how different design and pedagogical factors contribute to the creation and effectiveness of Islamic digital comics in educational settings. Table 1 presents the studies conducted by various researchers, indicating the number of elements clustered within each study according to the design dimensions. These dimensions are classified into five major categories: Instructional Design Model, Narrative and Storytelling Structure, Visual and Interface Design, Integration of Islamic Values, and Multimedia and Interactivity.

Table 1 shows studies under the design approach dimensions. RP1, RP2, RP3, RP4, RP5, RP7, RP8, and RP10 all followed systematic design model plans such as ADDIE or R&D models to ensure a coherent process for aligning learning objectives with the sequence of content and assessment. Narrative and storytelling factors were studied in RP1, RP2, RP3, RP5, RP7, RP8, RP9, and RP10, where plots or interactions were strategically planned to facilitate understanding, motivation, and moral reflection. Visual and interface design was studied by RP1, RP2, RP3, RP5, RP7, RP8, and RP10. noted that the visual clarity of the digital resources and organization on panels is crucial in fostering learner engagement. The highest consistency factor for promoting the Islamic values was achieved in RP1, RP2, RP3, RP4, RP5, RP6, RP7, RP9, and RP10. Among the studies, prophetic behaviour awareness and Islamic historical context, or *akhlaq*, Qur’anic principles were embedded in the comic through dialogue and storyline or visual elements as means to raise spiritual consciousness and ethical concerns. RP8, which was primarily concerned with the acquisition of Arabic vocabulary only did not explicitly contain value integration.

**Table 1**

Factors Studied in Design Approach Dimension Classification of Islamic Digital Comics (2019 – 2025)

| Research Paper Number (RP#) | Author  | Year | Factors                    |                                     |                           |                       |                            |
|-----------------------------|---|------|----------------------------|-------------------------------------|---------------------------|-----------------------|----------------------------|
|                             |   |      | Instructional Design Model | Narrative & Storytelling Structures | Visual & Interface Design | Integration of Values | Multimedia & Interactivity |
| RP1                         | Darmayanti, Rani  | 2022 | √                          | √                                   | √                         | √                     | √                          |
| RP2                         | Tamam, Badrud, Maria Chandra Sutarja, Aditya Rakhmawan, and Ach Mus'if.             | 2023 | √                          | √                                   | √                         | √                     | -                          |
| RP3                         | Ruchana, Enik, Hitta Alfi Muhimmah, and Julianto Julianto                           | 2025 | √                          | √                                   | √                         | √                     | √                          |
| RP4                         | Hasanah, Niswatun, Mohammad Syaifuddin, and Rani Darmayanti.                        | 2019 | √                          | -                                   | -                         | √                     | -                          |
| RP5                         | Praptiwi, Ucca Swasti, Agus Yulianto, and Ellianawati Ellianawati.                  | 2021 | √                          | √                                   | √                         | √                     | √                          |
| RP6                         | Lestari, S. U., Syarifuddin, S., & Nurhasan, N.                                     | 2025 | -                          | -                                   | -                         | √                     | √                          |
| RP7                         | Wafa, Salamah Sa'diatul   | 2024 | √                          | √                                   | √                         | √                     | √                          |
| RP8                         | Bahri, Muhammad Adhiem, Haeriyah Haeriyah, Yusring Sanusi Baso, and Andi Aggussalim | 2024 | √                          | √                                   | √                         | -                     | √                          |
| RP9                         | Randi, Muhammad Sinar, Siti Halimah, and Salamuddin Salamuddin                      | 2022 | √                          | √                                   | √                         | √                     | -                          |
| RP10                        | Setiawan, Johan, Muh Taufiq Nurwansyah, and Daud Yahya.                             | 2022 | √                          | √                                   | √                         | √                     | √                          |

Multimedia and interactivity were studied by RP1, RP3, RP5, RP6, RP7, RP8 and RP10. These studies employed interactive visuals, clickable elements, animations online delivery formats in an effort to promote engagement and some level of learner autonomy. Studies RP2, RP4, and RP9, however, used static comic formats with only slight interactivity, explicitly focusing on pedagogical or content design issues rather than digital enhancement as in this case.

**Table 2**

Factors Studied in Pedagogical Approach Dimension Classification of Islamic Digital Comics (2019 – 2025)

| Research Paper Number (RP#) | Author  | Year | Factors                     |                              |                                 |   |                                 |  |
|-----------------------------|---|------|-----------------------------|------------------------------|---------------------------------|---|---------------------------------|--|
|                             |   |      | Learning Theory / Framework | Instructional Design / Model | Integration of Islamic Pedagogy | Cognitive & Affective Learning Strategies | Learner Engagement / Evaluation |  |
| RP1                         | Darmayanti, Rani  | 2022 | √                           | √                            | √                               | √   | √                               |  |
| RP2                         | Tamam, Badrud, Maria Chandra Sutarja, Aditya Rakhmawan, and Ach Mus' if             | 2023 | √                           | √                            | √                               | √   | √                               |  |
| RP3                         | Ruchana, Enik, Hitta Alfi Muhimmah, and Julianto Julianto                           | 2025 | √                           | √                            | √                               | √   | √                               |  |
| RP4                         | Hasanah, Niswatun, Mohammad Syaifuddin, and Rani Darmayanti.                        | 2019 | √                           | √                            | -                               | √   | √                               |  |
| RP5                         | Praptiwi, Ucca Swasti, Agus Yulianto, and Ellianawati Ellianawati.                  | 2021 | √                           | √                            | √                               | √   | √                               |  |
| RP6                         | Lestari, S. U., Syarifuddin, S., & Nurhasan, N.                                     | 2025 | -                           | √                            | -                               | √   | √                               |  |
| RP7                         | Wafa, Salamah Sa'diatul   | 2024 | √                           | √                            | √                               | √   | √                               |  |
| RP8                         | Bahri, Muhammad Adhiem, Haeriyah Haeriyah, Yusring Sanusi Baso, and Andi Aggussalim | 2024 | √                           | √                            | √                               | √   | -                               |  |
| RP9                         | Randi, Muhammad Sinar, Siti Halimah, and Salamuddin Salamuddin                      | 2022 | √                           | √                            | √                               | √   | √                               |  |
| RP10                        | Setiawan, Johan, Muh Taufiq Nurwansyah, and Daud Yahya.                             | 2022 | √                           | √                            | √                               | √   | √                               |  |

Table 2 shows studies under the design pedagogical dimensions. RP1–RP10 studied diverse learning theories and pedagogical frameworks, including Constructivism, Values-Based Education (VBE), Cognitive Theory of Multimedia Learning (CTML), Humanism, and Problem-Based Learning (PBL). These frameworks guided the development of Islamic digital comics that promote active, reflective, and value-oriented learning. RP1, RP2, RP3, RP5, RP6, RP7, RP8, RP9, and RP10 studied instructional design or model factor, with the majority employing ADDIE or 4-D models. These structured models ensured pedagogical consistency from content analysis to implementation and evaluation, providing a solid framework for integrating faith-based education with digital creativity.

The integration of the Islamic pedagogy factor was studied by RP1–RP10 in their research. Each study embedded elements of faith, etiquette, and moral character within teaching content. Studies such as RP2, RP3, and RP7 effectively linked Quranic principles with subject knowledge, promoting a holistic balance between intellectual and spiritual development. RP1 – RP9 were studied as cognitive and affective learning strategies factors. These factors emphasized reflective learning, moral



reasoning, and emotional engagement as tools for character formation. Finally, learner engagement and evaluation were present in R01 – RP10, where outcomes such as increased motivation, understanding, and moral awareness were reported.

#### **4. Conclusion: Key Findings, Contributions, and Limitations**

This literature review systematically examined the design and pedagogical approaches employed in Islamic digital comics through analysis of 10 studies published between 2019 and 2025. The findings reveal consistent patterns in methodological frameworks, design strategies, and value integration approaches that characterize current research in this emerging field.

##### *4.1 Summary of Key Findings*

Analysis has shown that 80% of the reviewed studies were systematic. Instructional design models to structure content development and learning sequence alignment. Narrative coherence and visual design were prioritized, whereas in 70-80% of the studies, 90% clearly integrated Islamic values into both content and pedagogical approaches. The entire research was based on established learning theories. These studies report positive results on learner motivation and conceptual understanding.

##### *4.2 Identification of Islamic Pedagogical Elements*

One of the primary Islamic pedagogical elements that this review has identified as being embedded across the works being reviewed is character development, etiquette, Qur'anic principles, prophetic modelling, reflective practices, and spiritually significant narratives (stories). The data showed differing levels of systematic integration in the incorporation of the elements as follows: character development, etiquette in 90% of studies (RP1-RP3, RP5, RP7, RP9-RP10), Qur'anic principles in 90% of studies (RP1-RP3, RP5, RP7, RP9-RP10), while prophetic modelling and reflective practices in 80% of the studies (RP1-RP3, RP5, RP7-RP10). The emphasis on affective engagement through spiritually significant narratives in over 90% of the studies suggests that there was consensus regarding the primary importance of the emotional connection to the Islamic values. It suggests that Islamic digital comics are not merely a medium for presenting information visually. The implementation of these elements in most studies tends to be without frameworks. The analysis of the digitally published comics suggests that the works are not simply vehicles for presenting information visually. However, many studies do not have standardised frameworks for the implementation of these elements.

##### *4.3 Gaps in Research and Theoretical Contributions*

Despite these insights, three critical gaps emerged. First, though value integration is widespread, no theoretical framework has emerged yet that systematically combines Islamic pedagogical principles (*tarbiyah*, *ta'dib*, *ta'lim*) with multimedia learning theories. Second, the predominance of descriptive and developmental designs (90% combined) limits causal inferences regarding educational effectiveness. Third, validated Assessment instruments that can effectively measure spiritual learning outcomes remain underdeveloped. This review addresses the gaps in existing knowledge by synthesizing diverse design and pedagogical approaches, thus giving the foundational insights for future frameworks development of Islamic digital comic research.

#### 4.4 Limitations of This Review

Several limitations constrain the generalization of findings. The small sample size,  $N=10$ , and geographic concentration in Southeast Asia (70% coming from Indonesia and Malaysia) limit the broader applicability to varied Islamic educational contexts. The general acceptance of descriptive and developmental methodologies rather than experimental designs precludes conclusions regarding actual effectiveness and causation. Excluding exclusive reliance on indexed academic publications may have excluded relevant gray literature, institutional reports, or practitioner-developed resources. These are methodological constraints that limit this study, so findings have to be interpreted within this framework.

#### 5. Future Direction

The strategic directions for advancing future research include: first, conducting experimental and mixed-methods studies that utilize validated instruments to establish determinative relationships and provide empirical evidence of instructional effectiveness; second, incorporating emerging technologies such as artificial intelligence, augmented reality, and virtual reality to augment interactivity and personalization; and third, formulating comprehensive frameworks that methodically integrate Islamic educational principles with instructional design models. Collaboration among instructional designers, multimedia developers, and Islamic education scholars is necessary to ensure that the developed frameworks demonstrate both pedagogical strength and theological credibility. This interdisciplinary approach will strengthen Islamic digital comics as promising, evidence-informed pedagogical resources that support holistic learner development in contemporary digital learning environments while maintaining alignment with Islamic essential principles. As the evidence base grows through precise empirical research, these resources may advance into validated instructional tools that effectively bridge traditional Islamic educational values with modern multimedia learning affordances.

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