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A Conceptual Model for Integrating edX and Canva in Digital Islamic Religious Education

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Abstract:
The integration of digital technology in Islamic Religious Education (PAI) is often discussed at the level of individual platforms, leaving unclear how a source of learning resources and a tool for producing learning media can work together within one pedagogical design. This study analyzes the complementary pedagogical functions of edX and Canva and develops a conceptual model for integrating them in digital-based PAI learning. Using qualitative library research, we searched Google Scholar on 28 October 2026 with five keywords (130 records, 2021–2026), screened the records in stages by title, abstract, and full text, and retained 26 journal articles, supported by four official edX and Canva webpages and one book. The sources were coded across six analytical aspects, grouped into four themes through thematic analysis, and synthesized into the model. The findings show that edX functions as a source of enrichment resources, activities, interaction, and assessment, whereas Canva supports the organization, visualization, and production of learning materials and student products. The study contributes theoretically by shifting the discussion of technology integration from a tool-centered to a function-centered view, in which each platform is assigned a role according to learning objectives. This view is formalized in a six-stage model: (1) establishing learning objectives, (2) selecting enrichment resources from edX, (3) identifying visualization needs, (4) developing learning media in Canva, (5) guiding students to process and apply knowledge, and (6) evaluation and reflection. Practically, the model offers PAI teachers a sequence for selecting resources, deciding what to visualize, designing student products, and assessing both understanding and the application of Islamic values. The model has not been tested empirically, so classroom-based research is needed to examine its feasibility and effects.

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Introduction (مقدمة)

The development of digital technology has transformed the ways knowledge is accessed and learning is conducted. Learning is no longer limited to face-to-face interaction but can also take place through various digital platforms, including Learning Management Systems (LMS) and Massive Open Online Courses (MOOCs)(Alturki & Aldraiweesh, 2021). MOOCs provide online learning environments that allow learners to access learning materials and activities flexibly. Their main characteristics include the ability to accommodate large numbers of participants and support self-paced learning, enabling learners to manage their own learning processes (Ogunyemi et al., 2022). However, the availability of online resources and learning activities does not automatically guarantee learner engagement. A systematic review of MOOC learning indicates that learner engagement is influenced by both internal and external factors, including curriculum design and the learning environment (Wang et al., 2022). Furthermore, (Huang et al., 2023) report that although MOOCs attract large numbers of registrants, their completion rates remain relatively low. Case study of EdX learners likewise found that posting on the discussion board is a main learning activity factor influencing course completion (Shi & Lin, 2021), and a comparison of Coursera and edX identified learners' poor motivation and concentration as the greatest disadvantage of e-learning (Likovič & Rojko, 2022).These findings highlight the importance of designing learning environments that encourage participation, sustain engagement, and support course completion.

The integration of digital technology into Islamic Religious Education (PAI) must be aligned with the broader goals of religious education. PAI is not only oriented toward the mastery of religious knowledge but also encompasses an understanding of spiritual values, the development of moral character, and the application of Islamic teachings in daily life (Fakhrul et al., 2025). Therefore, digital learning resources must be selected and adapted to learning objectives and the characteristics of the students. The main challenge is not merely the availability of technology, but rather how various digital resources can be transformed into meaningful learning experiences that support students' religious understanding and character development (Abas & Supi'ah, 2025). In this regard, the integration of technology must be based on pedagogical considerations, not merely on the use of digital devices.

Previous research on the use of digital technology in Islamic Education (PAI) emphasizes the importance of integrating technology into instructional design that takes into account learning objectives, content, strategies, and student characteristics (Uy et al., 2025). The success of a digital technology-based transformation of Islamic education requires collaboration among teachers, educational institutions, and policymakers through human resource development, the provision of infrastructure, and curricular innovation that integrates technology with Islamic values (Kesuma et al., 2025). These perspectives suggest that digital technology should serve as a means to support educational goals, rather than becoming the primary focus of the learning process.

One MOOC platform that offers opportunities to support digital learning is edX. This platform provides online courses from various universities and is equipped with learning resources, videos, learning activities, discussion forums, and assessments (EdX, n.d.-c). The flexible learning environment allows participants to access learning materials anytime and from anywhere. These features provide participants with opportunities to learn independently and develop knowledge and skills in various fields (Supuwiningsih, 2025). In Islamic Education (PAI) learning, edX has the potential to be utilized as an enrichment resource that expands students' access to academic materials and perspectives beyond those available in conventional classroom settings.

The use of edX in Islamic Education (PAI) requires special consideration because the courses available on this international platform are not necessarily structured according to the curriculum framework, learning outcomes, and the context of Islamic education in Indonesia. Although these courses can provide a broader academic perspective on Islam, the material still needs to be selected, adapted, and contextualized by educators. The selection process must take into account learning objectives, student characteristics, and the relevance of the material to daily life. Thus, the use of edX in Islamic Education (PAI) goes beyond simply accessing online materials; it must involve a pedagogical process that connects the selected material to the expected learning outcomes. (Mareta & Muhammad, 2022) indicate that the internalization of religious values among students occurs through classroom learning and religious activities influenced by the educational environment. These findings underscore the importance of the educational context in shaping religious understanding and values. Therefore, digital resources used in PAI instruction must also be adapted to the specific context in which learning takes place.

In addition to accessing learning resources, digital learning requires the right tools to organize and present information visually. Canva has emerged as a digital design platform that supports the creation of presentations, infographics, videos, posters, and various other visual media. Research on the use of Canva in Islamic Education (PAI) shows that its use can foster students' interest and engagement through more active, focused, and engaging learning activities (Al-Ansori & Hamzah, 2026). Canva also allows teachers to present learning materials in a more structured and easily understandable way, thereby potentially supporting the development of engaging and interactive learning media (Fachrudin, 2025). Other research indicates that Canva has the potential to enhance students' creativity and participation, although training for educators and adequate infrastructure support remain necessary (Muhajir et al., 2025). These findings suggest that Canva functions not only as a design tool but also as a medium for students to organize, present, and communicate their understanding.

Another aspect to consider in digital learning is how students process information presented through an online environment. Material containing a large amount of information can be less effective if students have difficulty identifying key concepts, connecting various ideas, or organizing the information they have acquired. Research on digital learning highlights the importance of managing cognitive load in the design of online learning. Multimedia learning theory also emphasizes that the combination of text and images should be designed to aid understanding, not merely to enhance visual appeal (Skulmowski & Xu, 2021). In this context, Canva can be used to reorganize information obtained from edX into visual formats that support student understanding. These can take the form of concept maps, infographics, and structured presentations that connect various key concepts, making the learning material easier to understand.

The alignment between digital learning activities and Islamic Education learning outcomes also needs to be considered. Although MOOC platforms provide learning and assessment activities, their assessment methods may not necessarily cover all of the broader objectives of Islamic Education, such as religious understanding, the application of values, reflection, and the relationship between religious knowledge and daily life. Therefore, the use of edX as a supplementary resource must be accompanied by educators' selection and adaptation of learning activities and assessment strategies. Within this framework, visual products developed using Canva can serve as both learning activities and assessment tools. For example, students can create infographics, concept maps, or presentations to demonstrate their understanding of the material and their ability to connect the knowledge they have acquired to relevant learning contexts. This approach links access to digital knowledge with the active processing and presentation of that knowledge by students.

Previous studies provide useful but fragmented evidence. Research on MOOCs has

concentrated on engagement, interaction, and course completion, and it shows that access to large-scale online courses does not by itself produce sustained participation (Huang et al., 2023). However, these studies mainly explain why learners disengage; they say little about which learning activities should follow once learners have accessed course materials, and they rarely examine religious education, where outcomes also include values and their application. Research on Canva in PAI reports gains in interest, motivation, and teachers' ability to present material (Al-Ansori & Hamzah, 2026), but several of these studies are drawn from single-school or single-class settings (Lia Agustina & Wahyudiati, 2026) and treat Canva mainly as a medium through which teachers deliver content (Yuliana et al., 2023). Where the content comes from, how it is selected, and how it connects to assessment generally remain outside the analysis. Studies of digital PAI more broadly (Andrini et al., 2026) stress instructional design, institutional readiness, and policy, yet they remain at a general level and do not specify how particular platforms fit into a learning sequence. Table 1 summarizes how the present study differs from these strands of research.

Previous research has examined MOOCs, Canva, and digital Islamic Education from various perspectives. Research on MOOCs has primarily focused on course design, learner engagement, interaction, learning experiences, and course completion (Huang et al., 2023). (Wang et al., 2022) also emphasize that learning outcomes in MOOCs are influenced not only by the availability of technology but also by instructional design, interaction, learner engagement, and learner characteristics. Meanwhile, research on Canva has primarily addressed the development of visual learning media, creativity, interest in learning, and learning outcomes (Yuliana et al., 2023). Research on digital-based PAI learning has also largely highlighted the use of technology to expand the flexibility and variety of learning activities (Andrini et al., 2026). Although these various studies provide an important foundation, they have not sufficiently explained the pedagogical relationship between the selection of MOOC-based enrichment resources, information processing, visual media production, and the assessment of PAI learning outcomes within a single integrated conceptual framework. Thus, the research gap this article aims to address is not merely the technical integration of two digital platforms but the formulation of their complementary pedagogical functions within a structured learning process.

Table 1. Distinction between previous research and the present study

Research strand	Typical focus	Limitation relevant to this study	Position of the present study
MOOC research	Engagement, learning activities, course design, platform comparison, and completion ((Huang et al., 2023); (Likovič & Rojko, 2022), (Shi & Lin, 2021); (Wang et al., 2022))	Explains why learners disengage but does not specify the learning activities that follow access to course materials; seldom addresses religious education	Treats edX as a source of enrichment and places a structured processing activity after resource selection
Canva in PAI	Interest, motivation, creativity, and media development (Al-Ansori & Hamzah, 2026); (Asnawati &	Often limited to single-school settings and teacher-made media; the source of the content and assessment remain	Treats Canva as a tool for students to reorganize and communicate content, with products serving

	Sutiah, 2023); (Maula et al., 2025)	outside the analysis	as assessment objects
Digital PAI learning	Instructional design, institutional readiness, and policy ((Andrini et al., 2026); (Kesuma et al., 2025); (Uy et al., 2025))	General in scope; does not specify how particular platforms fit into a learning sequence	Specifies the function of each platform at each stage of a six-stage sequence

These limitations explain why edX and Canva are worth examining within a single pedagogical framework, and why the question is pressing. Online courses and design tools are now widely accessible, yet access alone leaves teachers without guidance on how to combine them, and the low completion rates reported in MOOC research (Huang et al., 2023) suggest that unguided use of online resources is unlikely to produce meaningful learning. The literature identifies two weaknesses separately, and the two platforms address them in complementary ways. MOOC platforms such as edX offer structured content from universities, but learners are left to process it on their own, which is where engagement and completion problems arise (Likovič & Rojko, 2022). Canva allows teachers and students to organize and present information, but it supplies no content of its own, so the quality of what is produced depends on the material that goes into it (Arikarani, 2024). From a cognitive load perspective, large volumes of information also need to be reorganized into forms that reduce extraneous load (Skulmowski & Xu, 2021). Using edX as a source of enrichment and Canva as a means of reorganizing and communicating that content creates a sequence, from access to processing to expression, that neither platform supports alone. For PAI this sequence matters because learning outcomes include understanding, reflection, and the application of values, which become visible only when students produce something that shows how they have interpreted the material.

Accordingly, the research gap is threefold. First, the studies reviewed here have not sufficiently linked the selection of MOOC-based enrichment resources to visual media production within one design. Second, the assessment of PAI learning outcomes in such a design has not been examined. Third, Canva studies in PAI offer limited guidance on the source and quality of the content being visualized. The originality of this study lies in responding to these gaps by asking not whether edX or Canva is effective, but how their distinct functions can be sequenced in a structured PAI learning process, and in proposing a model that places pedagogical objectives, rather than technological features, at the basis of integration.

Based on this gap, this study aims to analyze the complementary pedagogical functions of edX and Canva and to formulate a conceptual model for integrating the two into digital-based Islamic Education (PAI) learning. Specifically, this study addresses two questions: (1) How can the pedagogical functions of edX and Canva complement each other in PAI learning? and (2) How can the functions of these two platforms be integrated into structured learning stages? Through a literature review and thematic analysis, this study synthesizes relevant literature on MOOCs, Canva, and digital PAI learning to produce a conceptual model that places pedagogical objectives at the foundation of technology selection and utilization. The resulting model is expected to serve as an initial framework for PAI educators in designing digital learning experiences that connect access to knowledge resources with the processes of knowledge processing, production, and visualization. Furthermore, this model is expected to provide a conceptual foundation for future empirical research to examine its application in various educational contexts. Its originality lies in treating integration as a division of pedagogical functions guided by learning objectives, rather than as a technical connection between two applications

Method (منهج)

Research Approach and Design

This study uses a qualitative library research design with a conceptual orientation. It combines a documented, stepwise literature search, adapted from the identification, screening, and inclusion flow of PRISMA (Page et al., 2021), with thematic analysis (Braun & Clarke, 2006) to synthesize the selected sources into a conceptual model of integrating edX and Canva in PAI instruction. The design is not a full systematic review, because its purpose is not to estimate the effect of an intervention but to explain how the functions of two platforms can be arranged within a pedagogical sequence. As the model is not empirically tested, this study involves neither field data collection nor measurement of learning effectiveness.

Literature Search Strategy

Searches were conducted in Google Scholar on 28 October 2026. This database was chosen because it indexes both international journals and the Indonesian national journals in which most PAI studies are published, which was necessary to cover the Islamic Education context. Five keywords were used: "edX," "MOOC," "Canva," "Canva PAI," and "Digital-Based PAI Learning." Together they cover the platform, the online learning environment, the media tool, and the PAI context addressed by the research questions. Only publications from 2021 to 2026 were considered so that the review reflects current platform features and recent digital learning practice. Because Google Scholar ranks results by relevance, the first 30 results per keyword were examined, which kept the screening manageable while retaining the most relevant records. "Canva PAI" was limited to 10 results because it is a narrow combined query, and nine of its ten results duplicated records already retrieved by other keywords. The search produced 130 records (Table 2).

Table 2. Search results and screening outcomes by keyword

Keyword	Records examined	Duplicates	Excluded: unrelated	Excluded: no analytical content	Excluded: full text inaccessible	Included
edX	30	0	26	1	1	2
MOOC	30	6	1	13	4	6
Canva	30	4	11	4	4	7
Canva PAI	10	9	–	–	–	1
Digital-Based PAI Learning	30	16	1	0	3	10
Total	130	35	39	18	12	26

Inclusion and Exclusion Criteria

After 35 duplicates were removed, 95 records were screened by title and abstract, and the remaining candidates were checked against the full text. The inclusion and exclusion criteria are summarized in Table 3. Most exclusions came from the keyword "edX," where 26 of 30 results dealt with technical matters outside the scope of this study. Four official webpages (three from edX and one from Canva) and one book were added as supporting sources. The webpages were used only to describe platform features and functions, not as evidence of learning effects.

Table 3. Inclusion and exclusion criteria

Type	Criterion
Inclusion	Journal article published between 2021 and 2026
Inclusion	Full text accessible

Inclusion	Addresses edX or MOOCs, Canva, educational technology, or digital PAI learning
Inclusion	Discusses at least one analytical aspect: technological features and functions, instructional design, learning activities, material visualization, interaction, or assessment
Exclusion	Unrelated to learning or educational technology (n = 39)
Exclusion	Lacking relevant analytical content (n = 18)
Exclusion	Full text inaccessible (n = 12)
Exclusion	Duplicate record (n = 35)

Justification for the Selected Literature

The 26 journal articles are not a sample but all the sources that met the stated criteria within the documented search window; no additional cap on the number of articles was applied. The set was considered adequate for conceptual synthesis for three reasons. First, it covers the three strands on which the model draws: MOOCs and digital learning, Canva in learning, and digital PAI. Second, it combines international studies, which provide the pedagogical foundation, with national studies, which explain the Indonesian PAI context (19 national and 7 international articles in total). Third, the same functions, namely resource access, visualization, interaction, and assessment, recurred across independent sources, so the model does not rest on any single study. Because the aim is conceptual development rather than statistical generalization, adequacy was judged by the coverage of the analytical aspects and not by sample size.

Data Collection and Analysis

Data were collected through documentation. For each source, the author, year, context, and information relevant to the six analytical aspects defined in Table 4 were recorded. Thematic analysis then proceeded in four steps. First, the recorded information was coded against the six aspects. Second, related codes were grouped into four themes: the pedagogical functions of MOOCs and edX, Canva in learning, the needs and challenges of digital PAI learning, and opportunities for integrating learning platforms and visual media. Third, findings within and across themes were compared to identify similarities, differences, relationships, and gaps. Finally, the themes were synthesized to establish the relationship between edX as a source of learning enrichment and Canva as a tool for developing and visualizing learning materials. This synthesis informed the conceptual integration model, and its results are presented in Table 6.

Table 4. Analytical aspects used for coding

Analytical aspect	Guiding question
Technological features and functions	What does the platform offer, and what can it be used for?
Instructional design	How are objectives, content, and strategies organized?
Learning activities	What do learners and teachers do with the resources or media?
Material visualization	How is information represented visually to support understanding?
Interaction	How do learners interact with content, teachers, and peers?
Assessment	How are learning processes and outcomes evaluated?

Conceptual Model Development

The conceptual model was developed by synthesizing literature on PAI learning objectives, resource selection, visual media development, learning activities, and assessment. Each stage of the model was derived from at least one theme and traced back to the sources that support it (Table 6), and the stages were ordered according to the logical sequence of a learning process, from objectives to resources, visualization, media, activities, and evaluation. edX was positioned as a source of enriched learning materials and activities, while Canva supported the development, organization, and visualization of learning materials and outcomes. Thus, the

proposed integration is pedagogical and functional rather than technical. The resulting model remains conceptual and requires empirical testing to establish its applicability in PAI instruction.

Result (نتائج)

The Google Scholar search using five keywords identified 130 records. After removing 35 duplicates, 95 sources were screened by title, abstract, and full text. A total of 69 sources were excluded: 39 were unrelated to learning or educational technology, 18 lacked relevant analytical content, and 12 had inaccessible full texts. Consequently, 26 journal articles were selected (Figure 1). In addition, four official websites were used as supporting sources: three edX websites (two course pages and one course directory page) and one Canva website. One supporting book was also used to strengthen the conceptual foundation of the study. Articles on MOOCs and digital learning that did not specifically address Islamic Education were still used because they provided a pedagogical foundation, while articles on Islamic Education were used to explain the needs and context of its implementation.

Characteristics of the Literature Sources

The 26 analyzed articles comprised 19 national and seven international journal articles, published between 2021 and 2026. The publication distribution was as follows: 2021 (4), 2022 (4), 2023 (3), 2024 (3), 2025 (9), and 2026 (3).

Literature Synthesis Findings

The analysis indicates that edX and Canva have distinct but complementary pedagogical functions in PAI learning. Table 6 presents the synthesis of the selected literature by theme, showing the sources, the main findings, and the implication of each theme for the integration model. edX enriches learning through materials, activities, interaction, and assessment, whereas Canva supports the development and visualization of learning materials and student outputs. Their complementary functions allow both platforms to be integrated into a coherent learning sequence.

Table 6. Synthesis of the selected literature by themec

Theme	Sources	Main findings	Implication for the model
Pedagogical functions of MOOCs and edX	Alturki & Aldraiweesh (2021); Ogunyemi et al. (2022); Wang et al. (2022); Huang et al. (2023); Shi & Lin (2021); Likovič & Rojko (2022); Adriyanto et al. (2021); Utami et al. (2024); Supuwiningsih (2025); EdX (n.d.-c)	MOOCs and LMSs provide flexible, self-paced access to materials, activities, interaction, and assessment; engagement is shaped by instructional design and the learning environment, completion rates remain low, discussion participation is linked to completion, and weak motivation and concentration are a main drawback	edX is a source of enrichment whose materials must be selected and organized by teachers (Stage 2); its assessments are supplementary (Stage 6)
Canva in learning	Al-Ansori & Hamzah (2026); Fachrudin (2025); Muhajir et al. (2025); Maula et al. (2025); Lia Agustina & Wahyudiati (2026);	Canva supports structured, interactive visual media and is associated with interest, motivation, creativity, and	Canva is used after visualization needs are identified (Stages

	Asnawati & Sutiah (2023); Yuliana et al. (2023); Arikarani (2024); Canva (n.d.)	participation; findings come mostly from specific school contexts and depend on teacher training, infrastructure, and curriculum adaptation	3 and 4), and student products become learning activities (Stage 5)
Needs and challenges of digital PAI learning	Fakhrul et al. (2025); Abas & Supi'ah (2025); Uy et al. (2025); Kesuma et al. (2025); Ali (2025); Mareta & Muhammad (2022); Andrini et al. (2026)	PAI aims at understanding, values, and character, so technology must follow learning objectives and fit the educational context; success depends on teachers, institutions, infrastructure, and content quality	Objectives come first (Stage 1); resources are adapted to context (Stage 2); evaluation includes values (Stage 6)
Opportunities for integration	Skulmowski & Xu (2021); Tahir et al. (2024); Zahrah et al. (2025)	Large amounts of information need to be reorganized to reduce extraneous cognitive load; digital content can support the application of Islamic values and learning motivation	Students process and apply the material through visual products linked to real-life contexts (Stage 5)

Comparing findings across the four themes reveals three patterns. First, the sources agree that access to resources or attractive media does not by itself ensure learning: MOOC studies point to engagement and completion problems ((Huang et al., 2023); (Wang et al., 2022)), and Canva studies point to the need for teacher training, infrastructure, and curriculum adaptation ((Arikarani, 2024); (Muhajir et al., 2025)). Second, studies of digital PAI consistently place learning objectives and educational context before technology ((Ali, 2025); (Fakhrul et al., 2025); (Mareta & Muhammad, 2022)), which supports positioning objectives as the first stage of the model. Third, the strands remain separate: the MOOC and Canva studies rarely address religious education, and the digital PAI studies stay at a general level without specifying how particular platforms can be sequenced. This gap is what the proposed model addresses.

Based on this synthesis, the study proposes a six-stage integration model (Figure 2): (1) establishing learning objectives; (2) selecting enrichment resources from edX; (3) identifying visualization needs; (4) developing learning media in Canva; (5) guiding students to process and apply knowledge; and (6) evaluation and reflection. Stages 1 and 6 are pedagogical decisions made by the teacher, stage 2 relies mainly on edX, stages 3 and 4 on Canva, and stage 5 on both platforms, while the reflection in stage 6 informs the next learning cycle.

Unlike previous studies that generally examine MOOCs, Canva, and digital learning separately, this study connects digital learning enrichment with visual media development in one pedagogical framework. Its contribution is a conceptual model explaining how edX and Canva can complement each other in PAI instruction. However, the model remains conceptual and requires further empirical testing.

Discussion (مناقشة)

1. The Functional Relationship between edX and Canva in Islamic Religious Education

The main finding of this study indicates that edX and Canva serve different but complementary pedagogical functions in Islamic Religious Education (PAI). Their relationship is

not based on similarities in features but rather on the division of roles within the learning process. edX provides learning resources and an enrichment environment, whereas Canva helps teachers and students develop and present learning materials in visual formats. This functional relationship suggests that educational technologies do not necessarily need to be integrated into a single platform that accommodates all learning needs. Instead, different technologies can be used sequentially according to their respective pedagogical functions and learning objectives.

The position of edX as a source of learning enrichment is consistent with the characteristics of MOOCs, which provide access to online learning materials and activities. (Adriyanto et al., 2021)explain that MOOC research encompasses course design, learning activities, interaction, feedback, and learner experiences. (Utami et al., 2024) also demonstrate the potential of MOOCs to provide flexible and remotely accessible learning opportunities. Nevertheless, such flexibility does not automatically guarantee learner engagement and learning success. (Likovič & Rojko, 2022)similarly report that the greatest advantage of e-learning is the removal of time and space constraints, while its greatest disadvantage is learners' poor motivation and concentration, and (Shi & Lin, 2021) found that posting on the discussion board is a main learning activity factor influencing the completion of edX courses.Learners still face challenges in managing learning materials, organizing their time, applying theoretical knowledge, and obtaining adequate guidance. Therefore, the use of edX in PAI learning needs to be accompanied by the selection of relevant materials and and the organization of learning activities by teachers to ensure alignment with learning objectives.

In the context of PAI, the use of edX is not intended to replace the entire learning process or the existing curriculum. The available materials need to be examined for their relevance to learning outcomes, student characteristics, and the Islamic context of the subject being studied. This is consistent with (Ali, 2025), who emphasizes the importance of institutional readiness, digital content quality, and pedagogical strategies in digital-based PAI learning. Accordingly, the contribution of edX lies in expanding learning resources, while teachers remain responsible for determining their relevance and guiding their use.

2. The Role of Canva in Processing and Visualizing PAI Learning Materials

Canva serves a different function from edX. While edX provides enrichment resources, Canva functions as a tool for organizing and presenting information visually. Materials obtained from digital sources can be developed into presentations, infographics, posters, videos, or concept maps (Canva, n.d.). In PAI learning, these visual formats can be used to explain relationships between concepts, the meanings of Qur'anic verses, hadith values, and examples of moral conduct in everyday life.

This finding is consistent with (Maula et al., 2025), who indicate that Canva can support the presentation of learning information through visual media. (Lia Agustina & Wahyudiati, 2026) also demonstrate that Canva can support the development of more varied and interactive learning media. Meanwhile, (Asnawati & Sutiah, 2023) found that the development of Canva-based animated videos contributed positively to students' learning motivation. Nevertheless, these findings cannot be generalized to conclude that the use of Canva always improves learning outcomes in every educational context.

The pedagogical value of Canva is determined not merely by the attractiveness of the media but, more importantly, by the suitability of its visual format for the learning objectives. Visual media developed without considering content and learning needs risk becoming merely decorative elements. (Arikarani, 2024) indicates that Canva implementation also requires teacher training, adequate infrastructure, and curriculum adaptation. Therefore, in the proposed model, Canva is used after teachers have identified the learning materials that require visualization. This

sequence is important to ensure that the media genuinely helps students understand and process information rather than merely making the presentation of materials more attractive.

3. The Novelty of the Functional Integration of edX and Canva

The distinction between this study and previous research lies in how the functions of technology are connected within a single learning process. Previous studies on MOOCs generally examine course design, access, learning activities, interaction, and learner engagement. Research on Canva has mainly focused on media development, creativity, interest, and learning outcomes. Meanwhile, studies on digital PAI learning have highlighted the use of technology to expand access and diversify learning activities. These three research trends provide an important foundation; however, they have not sufficiently explained the functional relationship between MOOC-based learning enrichment resources and visual media development within a single pedagogical design for PAI learning.

The novelty of this study does not lie in discovering new features or establishing a technical connection between edX and Canva. Rather, its contribution lies in formulating the division of functions between the two platforms based on learning needs. edX is positioned as a source of learning materials and enrichment activities, Canva as a tool for developing and visualizing learning materials or learning products, and PAI learning objectives as the basis for determining resource selection, learning activities, and assessment. Through this division of roles, the use of technology goes beyond accessing materials or creating media and is directed toward processing and communicating knowledge.

Thus, this model offers the perspective that technology integration in PAI learning can be established through interconnected pedagogical functions, even when the platforms are not technically connected. This approach extends discussions on educational technology from the individual use of applications toward the design of learning processes that connect learning resources, information processing, media production, and assessment.

4. Critical Interpretation and Comparison with Previous Studies

The finding that edX and Canva complement each other does not mean that the two platforms are automatically suitable for integration. Rather, the literature indicates that each platform, when used independently, still has certain pedagogical limitations. Research on MOOCs shows that open access to well-structured courses does not necessarily guarantee learner engagement or course completion (Huang et al., 2023). Similarly, studies on Canva indicate that engaging media do not necessarily ensure effective learning (Arikarani, 2024). Therefore, the contribution of this model lies in formulating the mechanism of their integration. edX provides content selected in accordance with learning objectives, Canva enables learners to reorganize and transform that content, and the resulting products serve as evidence of understanding for assessment. Thus, integration refers to the sequencing of functions rather than merely connecting software applications.

Compared with MOOC studies, which view learner engagement as an outcome that needs to be explained (Ogunyemi et al., 2022), this model views engagement as something that can be intentionally designed by placing content-processing and production activities after access to learning resources. This idea is a proposed approach rather than an established finding, so it still needs to be tested. Compared with Canva studies that report increased interest and motivation (Asnawati & Sutiah, 2023), this model shifts Canva's role from a tool for teacher-created presentations to a platform for learner-created learning products. This approach is consistent with the potential for creativity and participation reported by (Muhajir et al., 2025).

Compared with general studies of digital Islamic Religious Education (PAI), which emphasize readiness, policies, and infrastructure (Kesuma et al., 2025), this model focuses on classroom-level instructional design. It therefore complements rather than replaces those studies. Finally, the model is consistent with (Skulmowski & Xu, 2021) argument on cognitive load, which suggests that visualizations should address identified learning needs rather than serve merely as decoration

5. Conceptual Model for Integrating edX and Canva in Islamic Religious Education (PAI)

Based on the literature synthesis, this study formulates a functional integration model of edX and Canva in Islamic Religious Education (PAI), consisting of six stages (Figure 2). First, establishing learning objectives, which involves determining the knowledge, attitudes, and skills to be achieved. Second, selecting enrichment resources from edX, which involves identifying courses, materials, videos, activities, and assessments relevant to the learning objectives. These resources need to be adapted to the learning outcomes, student characteristics, and PAI learning context. Therefore, edX functions as a source of enrichment rather than a replacement for the entire learning process. Third, identifying visualization needs, which involves identifying concepts, relationships between ideas, sequences of events, or the application of values that require visual representation to support students' understanding. Fourth, developing learning media in Canva, which involves transforming selected materials into infographics, concept maps, presentations, posters, or other visual formats. These media can be developed by teachers as instructional materials or by students as learning products. Fifth, guiding students to process and apply knowledge, which involves guiding students to analyze, connect, and process information obtained from edX in relation to real-life contexts and communicate their understanding through visual products. Sixth, evaluation and reflection, which involve assessing the achievement of learning objectives through subject matter understanding, information processing skills, the application of Islamic values, and the quality of learning products, while also reflecting on the contribution of visual media to the learning process.

Conceptual Model of the Functional Integration of edX and Canva in PAI Learning

Stage	Main Function	Role of edX	Role of Canva
1. Establishing PAI learning objectives	Determining learning competencies	–	–
2. Selecting enrichment resources from edX	Selecting enrichment materials	Providing learning resources and course environments	–
3. Identifying visualization needs	Identifying visualization needs	Providing relevant materials	–
4. Developing learning media in Canva	Developing visual materials	Providing content sources	Developing visual media
5. Guiding students to process and apply knowledge	Processing and applying learning materials	Providing materials and enrichment activities	Providing visual media and learning products
6. Evaluation and reflection	Assessing learning processes and outcomes	Providing supplementary	Providing visual products as assessment objects

		activities or assessments	

The model positions PAI learning objectives as the basis for selecting and utilizing technology. edX serves as a source of enrichment through course materials, videos, activities, and assessments, while Canva is used to develop and present information in visual formats. Both platforms are integrated according to pedagogical needs rather than simply being used simultaneously.

The application of this model can be illustrated through learning activities on the Qur'an. Teachers can use the Introduction to the Quran: The Scripture of Islam course on edX (EdX, n.d.-a) as an enrichment resource covering the structure of the Qur'an, its main themes, or the context of Qur'anic revelation. Relevant materials are then selected and adapted to the PAI learning objectives. Students subsequently organize the information they have acquired into concept maps, infographics, or visual summaries using Canva. These products can be used as materials for presentations and discussions to communicate their understanding.

In the topic of Islamic Morality (Akhlak), the Islamic Bioethics course (EdX, n.d.-b) can be utilized to enrich students' understanding of the relationship between Islamic ethics and contemporary issues, such as organ donation and reproductive technology. After studying the materials and analyzing the issues presented, students identify relevant moral values and present their analysis in the form of infographics using Canva. These infographics may include the issues being discussed, relevant Islamic values, and their application in everyday life. Both examples demonstrate that the integration of edX and Canva connects access to knowledge resources with activities involving information processing, application, and communication of learning outcomes.

6. Theoretical and Practical Implications of the Integration Model

The integration model of edX and Canva has several implications for PAI learning. First, the model creates opportunities to develop more multimodal learning experiences. Students can obtain information through texts, videos, activities, and assessments available in edX courses, and subsequently process the information through visual representations using Canva. The use of different forms of presentation can help teachers develop more varied learning experiences. This is consistent with (Ali, 2025), who explains the importance of information technology in PAI learning, as well as (Tahir et al., 2024), who emphasize the potential of digital content to support the application of Islamic values in everyday life. (Zahrah et al., 2025) also associate the use of information technology with learning motivation, educational access, and personalized learning.

Second, this model encourages more active learning activities. Students do not merely receive information from edX resources but are also guided to identify key ideas, connect learning materials with real-life contexts, and present their understanding through visual products. These activities may include creating infographics, concept maps, posters, or presentations. In PAI learning, such activities can be applied to process information about Qur'anic verses, the messages of hadith, moral values, and religious issues related to everyday life. Accordingly, Canva functions as a means for students to communicate the results of their thinking rather than merely as a tool for teachers to create presentation materials. The use of Canva to support media development and learning activities is consistent with the discussion presented by (Maula et al., 2025).

Third, this model emphasizes the importance of alignment among technology, learning materials, activities, and PAI learning objectives. Teachers need to ensure that the materials selected from edX are relevant to PAI learning outcomes. Subsequently, the visual formats developed through Canva should support students' understanding of those materials.

Assessment should also be designed according to PAI learning objectives, including students' understanding of the subject matter and their ability to relate Islamic values to real-life contexts. This means that the success of technology use cannot be assessed merely by the availability of platforms or the attractiveness of learning media; rather, it should be considered in terms of their relevance to the learning process and objectives.

Theoretically, the model contributes to digital PAI pedagogy in three ways. First, it moves the discussion of technology integration from a tool-centered to a function-centered view, in which a platform is chosen because it serves a stated learning objective at a specific stage, not because it is available or popular. Second, it extends digital learning beyond cognitive mastery, because the evaluation stage explicitly includes the application of Islamic values and reflection, in line with the broader aims of PAI described by (Fakhrul et al., 2025). Third, it treats external content as material to be adapted and not simply adopted, which responds to concerns about the contextualization of Islamic education (Mareta & Muhammad, 2022). In this way, the model supports the view that technology is part of pedagogical design rather than an end in itself.

Practically, the model gives PAI teachers an ordered reference for selecting digital enrichment resources, deciding what needs visualization, designing student activities and products, and determining assessment strategies. Institutions can also use the stages as a basis for teacher training and for reviewing whether digital resources serve learning objectives. However, its implementation still needs to be adapted to student characteristics, available facilities, and educational institutional policies, as discussed in the next section.

7. Implementation Challenges

Implementing the model faces at least four practical challenges: digital infrastructure, teacher competencies, content relevance, and student engagement. The first is digital infrastructure. edX courses depend on stable internet access and suitable devices, and Canva requires an account and a device capable of design work; limited facilities have been identified as a constraint on Canva use in schools (Muhajir et al., 2025). The second is teacher competencies. The model asks more of teachers than the use of ready-made media: they must evaluate external courses, identify what needs visualization, and design assessment for student products, competencies that earlier studies associate with training and institutional support. The third is content relevance. The two edX courses used as examples were developed by non-Indonesian universities, are offered in English, and are not built on the Indonesian PAI curriculum, so selection must consider language, the academic perspective of the course, and curricular fit, and some material may be suitable only as teacher-side enrichment. The fourth is student engagement. MOOC completion is often low (Huang et al., 2023), and student products can become a formality if they are not tied to clear learning objectives and assessment.

8. Limitations and Directions for Future Research

This study has several limitations. First, the research was conducted through literature analysis without experiments or direct classroom observations. Therefore, it cannot yet establish the effectiveness of integrating edX and Canva in improving students' learning outcomes. Second, the features and structures of both platforms may change as their services are updated. Consequently, the model may need to be reviewed when changes occur that affect their pedagogical functions. Third, some of the literature on Canva in PAI learning focuses on media development or specific learning contexts. Therefore, applying these findings to different learning contexts should be approached with caution.

These limitations indicate that the proposed model needs to be further examined through

implementation-based research. Future studies may employ experimental designs, quasi-experimental designs, design-based research, or action research in specific PAI subjects or topics. Aspects that could be investigated include learning engagement, conceptual understanding, digital literacy, creativity, information organization skills, and the quality of learning products. Further research could also compare learning that uses edX resources with and without Canva-supported visualization to identify the contribution of each component to the learning process. In this way, the proposed model can serve as a foundation for developing and testing more purposeful technology integration in accordance with the needs of PAI learning.

Conclusion (خاتمة)

This study highlights the complementary pedagogical functions of edX and Canva in digital-based Islamic Religious Education (PAI). edX provides learning resources for knowledge enrichment, while Canva enables learners and educators to process and visualize learning materials. The main contribution of this study is a six-stage conceptual model integrating both platforms, from establishing learning objectives and selecting resources to developing media, conducting learning activities, and evaluating outcomes. This model offers an initial framework for designing more structured and meaningful digital PAI learning. Theoretically, it shifts the discussion of technology integration from a tool-centered to a function-centered view, and practically it offers PAI teachers an ordered sequence for selecting resources, designing student products, and assessing learning

However, the proposed model remains conceptual and requires empirical validation. Future research should examine its implementation through experimental, quasi-experimental, or design-based research, focusing on learner engagement, understanding of PAI materials, creativity, and the quality of learning outcomes. Such studies are necessary to establish the model's applicability, benefits, and limitations in actual learning contexts.

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