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Implementation of Interactive Digital Modules Based on Integrative Learning Models to Improve Students' Religious Literacy: A Qualitative Case Study

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Abstract
This study examines the implementation of an Interactive Digital Module based on the Integrative Learning Model to improve students' religious literacy in Islamic Religious Education (PAI). The urgency of this research arises from the challenges of conventional PAI learning, which tends to be textual, fragmented, and insufficiently contextual amid the Industrial Revolution 4.0 and Society 5.0. Using a qualitative case study approach, this research was conducted at MAN 1 Bireuen, Aceh, involving teachers, students, and curriculum stakeholders. Data were collected through in-depth interviews, participatory observation, and documentation studies, then analyzed using Miles and Huberman's interactive model of data condensation, data display, and conclusion drawing/verification. The findings indicate that implementing an Interactive Digital Module that integrates Qur'anic values, contemporary social realities, and multimedia elements encourages students to move beyond cognitive memorization toward a deeper internalization of religious values. The module facilitates students in connecting religious content with everyday-life contexts, thereby supporting a more comprehensive, contextual, and applicative form of religious literacy. The novelty of this study lies in the systematic use of the Fogarty integrative model as a pedagogical framework within a digital platform that prioritizes interactive engagement over mere content digitization an emphasis that distinguishes it from prior PAI digital-media studies, which have concentrated largely on content migration or technical adoption. This research contributes an instructional framework that may inform the future development of integrative, interactive digital media for PAI; as a qualitative case study, it does not claim generalizable or causal effects, and any transfer of these findings to other settings should be assessed with due caution.

Keyword: Interactive Digital Module, Integrative Learning Model, Religious Literacy, Islamic Religious Education, Qualitative Case Study

Abstrak

Penelitian ini mengkaji penerapan Modul Digital Interaktif berbasis Model Pembelajaran Integratif untuk meningkatkan literasi keagamaan peserta didik dalam mata pelajaran Pendidikan Agama Islam (PAI). Urgensi penelitian ini berangkat dari tantangan pembelajaran PAI konvensional yang cenderung tekstual, terfragmentasi, dan kurang kontekstual di tengah perkembangan Revolusi Industri 4.0 dan era Masyarakat 5.0. Penelitian ini menggunakan pendekatan kualitatif dengan desain studi kasus yang dilaksanakan di MAN 1 Bireuen, Aceh, dengan melibatkan guru, peserta didik, dan pemangku kepentingan kurikulum. Data dikumpulkan melalui wawancara mendalam, observasi partisipatif, dan studi dokumentasi, kemudian dianalisis menggunakan model interaktif Miles dan Huberman yang meliputi kondensasi data, penyajian data, serta penarikan dan verifikasi kesimpulan. Hasil penelitian menunjukkan bahwa penerapan Modul Digital Interaktif yang mengintegrasikan nilai-nilai Al-Qur'an, realitas sosial kontemporer, dan unsur multimedia mendorong peserta didik untuk beralih dari sekadar menghafal konsep secara kognitif menuju penghayatan nilai-nilai keagamaan yang lebih mendalam. Modul tersebut memfasilitasi peserta didik dalam menghubungkan materi keagamaan dengan konteks kehidupan sehari-hari sehingga mendukung pengembangan literasi keagamaan yang lebih komprehensif, kontekstual, dan aplikatif. Kebaruan penelitian ini terletak pada penerapan Model Integratif Fogarty secara sistematis sebagai kerangka pedagogis dalam platform digital yang mengutamakan keterlibatan interaktif peserta didik, bukan sekadar digitalisasi materi. Penekanan tersebut membedakan penelitian ini dari studi sebelumnya mengenai media digital dalam pembelajaran PAI yang sebagian besar berfokus pada pemindahan konten ke format digital atau adopsi teknologi dari aspek teknis. Penelitian ini memberikan kontribusi berupa kerangka pembelajaran yang dapat menjadi acuan bagi pengembangan media digital interaktif yang integratif dalam pembelajaran PAI pada masa mendatang. Namun, sebagai studi kasus kualitatif, penelitian ini tidak dimaksudkan untuk mengklaim adanya efek kausal atau menghasilkan temuan yang dapat digeneralisasikan. Oleh karena itu, penerapan temuan penelitian ini pada konteks lain perlu dipertimbangkan secara cermat dengan memperhatikan karakteristik masing-masing lingkungan pembelajaran.

Kata Kunci: *Modul Digital Interaktif, Model Pembelajaran Integratif, Literasi Keagamaan, Pendidikan Agama Islam, Studi Kasus Kualitatif.*

A. INTRODUCTION

Islamic Religious Education (PAI) occupies a strategic position within the Indonesian national education system, functioning not only as a medium for transmitting religious knowledge but also as a vehicle for shaping a complete Islamic character and personality (Muhaimin, 2006: 23). In a broader perspective, PAI carries the mission of forming *insan kamil* who are able to integrate the dimensions of faith, knowledge, and practice harmoniously in daily life (Azra, 2012: 7). Amid the increasingly rapid flow of global information, PAI's challenge has grown more complex: how to build a solid religious literacy that goes beyond the ability to read religious texts, toward the ability to understand, analyze, and internalize Islamic values critically and contextually. The Industrial Revolution 4.0 era, marked by massive digital connectivity, artificial intelligence, and big data, has fundamentally changed how humans live, work, and learn

(Schwab, 2016: 14–15). Society 5.0 further emphasizes that technology must remain human-centered, making the interaction between the digital dimension and the value dimension increasingly crucial. In this context, the way students consume, process, and internalize information including religious information has changed significantly, so that religious learning methods and media must adapt to the reality of the digital ecosystem (Rosyada, 2017: 45).

Ironically, the portrait of PAI learning in the field remains far from ideal. Classical studies have long noted that PAI learning is often textual and verbalistic, with teachers dominating the process through one-way lecturing while students remain passive recipients (Hamalik, 2009: 56). More recent empirical work confirms that this pattern persists even as digital tools are introduced: Falah, Syahlarriyadi, Juniarti, and Diyana (2025) found that although digital platforms increased student engagement in Islamic Religious Education, teachers and students diverged sharply in perceiving whether that engagement translated into deeper spiritual or affective learning, with several teachers reporting that value internalization remained superficial. The continued use of static print media thick textbooks with long narratives has further reduced the enthusiasm of the digital-native generation, who are accustomed to visual and interactive content. This condition is worsened by a partial, compartmentalized approach to instruction: faith is taught without connection to its implications for morals; fiqh is taught as memorization of ritual procedures divorced from real-life context; Islamic history is narrated as a chronicle of events with little contemporary relevance (Majid, 2012: 78). As a result, students' understanding of religious values tends to remain at the cognitive level memorizing postulates, naming pillars, answering exam questions without reaching genuine internalization, in which these values become an integrated guide for daily behavior and perspective (Sudjana and Rivai, 2010: 2). This condition signals a clear weakness in the comprehensive dimension of students' religious literacy.

A growing body of recent research has sought to respond to this challenge through the development of digital learning media for PAI. Sulaiman (2023) developed a blended-learning e-module for PAI and found it practical and valid for classroom use, though the study's focus remained on the module's technical usability rather than on its pedagogical architecture. Munadirin, Muslim, and Fatah (2023) examined an 'Active Deep Learning Experience' approach to PAI in the digital era, emphasizing learner-engagement strategies but stopping short of embedding a formal curriculum-integration framework. Nugraha, Abdel Rahim, and Lukman (2024) combined problem-based and flipped-learning strategies in PAI to advance sustainability-related competencies, demonstrating the value of hybrid pedagogical designs without addressing religious literacy as a multidimensional construct. Most recently, Falah et al. (2025) showed that digital transformation in PAI learning management can raise engagement while leaving the internalization of Islamic values contested and difficult to evaluate.

Taken together, these studies point to three recurring limitations. First, most digital PAI media development still centers on content migration or technical delivery moving printed material into digital format or adopting ready-made platforms without a systematic pedagogical framework guiding how content should be structured (Arsyad, 2014: 29). Second, where pedagogical intent is present, it rarely draws on a formal curriculum-integration model; the Integrative Learning Model, which seeks to connect content, context, and disciplines within a coherent unity, remains largely absent from this literature despite its strong theoretical fit with Islam's own integrative worldview (Sya'bani, 2018: 34). Third, religious literacy itself is seldom treated as a multidimensional construct spanning cognitive, affective, and praxis dimensions; existing

studies tend to measure engagement or technical effectiveness rather than the depth or breadth of literacy achieved (Fitri, 2012: 61). This constitutes the research gap addressed by the present study: to the researchers' knowledge, no prior work has systematically examined the implementation of a digital PAI module explicitly designed around a formal integrative curriculum model, with religious literacy rather than engagement or usability alone as its central outcome of interest. The position of this study is to occupy that gap: rather than proposing another content-digitization tool or a generic engagement strategy, it investigates how an integrative pedagogical architecture, embedded in an interactive digital platform, shapes the lived process of religious-literacy formation in the madrasah classroom.

Responding to this gap, the present study explores in depth the implementation of Interactive Digital Modules based on the Integrative Learning Model as an alternative pedagogical approach. The interactive digital module in question is not merely a digitized version of a conventional textbook, but a learning ecosystem incorporating animated videos, worship simulations, cross-reference links, and interactive quizzes with live feedback, systematically designed around the principles of an integrative model (Gunawan, 2014: 203). The Integrative Learning Model, as developed within the curriculum-design tradition, emphasizes connecting learning content with students' real experiences, with relevant contemporary issues, and with other disciplines in a meaningful way (Rusman, 2014: 35). This module thus allows students not only to understand religious concepts in isolation, but to perceive the organic relationship between Islamic teachings and the reality of their lives, so that the internalization of values can occur more naturally, deeply, and sustainably (Joyce, Weil, & Calhoun, 2015: 422).

The novelty of this research is best understood comparatively. Existing studies on PAI digital media have largely concentrated on the digitization of content and materials, or on technical adoption of ready-made platforms (Sulaiman, 2023; Falah et al., 2025); their principal limitation is a predominant focus on content delivery rather than pedagogical architecture. The present study departs from that pattern by foregrounding an integrative pedagogical architecture specifically, Fogarty's webbed and integrated typologies as the organizing logic of the digital module itself. Its contribution lies in linking three elements rarely examined together in this literature: digital interactivity, deliberate curriculum integration, and a multidimensional conception of religious literacy encompassing cognitive, affective, and praxis outcomes. It should be noted that the Fogarty framework itself dates to 1991; the novelty claimed here lies not in the model's age but in its systematic operationalization within a digital PAI platform explicitly oriented toward religious-literacy formation, a combination that has not, to the researchers' knowledge, been previously documented in this context (Fogarty, 1991: xi–xiv).

The main objectives of this study are: (1) to describe the process of implementing Interactive Digital Modules based on the Integrative Model in PAI learning; (2) to analyze the factors that support and hinder its implementation; and (3) to explore its perceived contribution to the formation of students' religious literacy, as understood from the participants' perspectives. This research is thus expected to make theoretical and practical contributions for educators, curriculum developers, and Islamic education policymakers in designing PAI learning that is more relevant, contextual, and transformative (Roqib, 2009: 17).

B. METHOD

This study employs a qualitative approach considered most appropriate for exploring in depth the meaning, perception, and experience of participants in the implementation of the Interactive Digital Module based on the Integrative Learning Model (Moleong, 2017: 6). The qualitative approach was chosen because this study does not aim to measure variables numerically, but to understand socio-educational phenomena holistically, contextually, and interpretively (Sugiyono, 2018: 9). As Creswell notes, qualitative research seeks to explore and understand the meaning that individuals or groups attach to a social or human problem (Creswell, 2014: 14).

It is important to clarify the methodological identity of this study at the outset, in response to a fundamental question raised in the review process: where and how was the interactive digital module developed? The module examined here was not designed, developed, or validated as part of the present research; rather, the module had been developed over the preceding academic years by Abi Murdani, a PAI teacher at MAN 1 Bireuen, as part of the school's ongoing effort to enrich religious-education materials; it had already been developed and adopted by the participating madrasah's PAI teachers through their own prior curriculum-development efforts. This study therefore does not follow a research-and-development (R&D) design such as ADDIE, 4D, or Design-Based Research, which would require documentation of needs analysis, design, expert validation, and iterative revision of the module itself. Instead, it adopts a qualitative case-study design focused on how an already-implemented module functions pedagogically in practice that is, on the lived process, the supporting and inhibiting factors, and the perceived outcomes of its classroom implementation. This methodological choice is reflected in the reframing of the study's title and objectives around implementation rather than development.

The research design used is a qualitative case study, specifically a single-case study in which MAN 1 Bireuen constitutes a bounded case (Yin, 2018: 48–51). This design enables an in-depth, holistic investigation of the module's implementation within its real-life context at this site. The site was selected purposively based on the following criteria: (a) the school had implemented digital learning media in PAI subjects for at least one academic year prior to data collection; (b) it had adequate digital infrastructure to support module use; and (c) its PAI teachers had prior experience facilitating digitally mediated instruction.

The research subjects were selected using purposive sampling, based on the consideration that selected participants possessed knowledge and experience relevant to the research focus. Participants included: (a) four PAI teachers who actively used digital media in learning; (b) twenty-five grade-XI students representing varying levels of engagement with digital learning; and (c) one school principal/vice-principal for curriculum affairs, serving as a policy-level informant. This total of thirty participants was considered sufficient based on the principle of information power (Malterud, Siersma, & Guassora, 2016: 1755–1756): participants were selected for the specificity and richness of their experience with the module rather than for statistical representativeness, and data collection continued until no substantially new themes emerged across interviews, observations, and documentation.

The data collection techniques used include three main methods that complement one another (source and method triangulation). First, semi-structured in-depth interviews with all participants to explore their perspectives, experiences, and reflections on the implementation of the module. Second, participatory observation in the classroom during the learning process, to directly observe the interaction between students,

teachers, and the digital module. Third, a documentation study of the lesson implementation plan (RPP), the content of the digital modules used, and relevant student work.

The collected data were analyzed using the Miles and Huberman interactive model of qualitative data analysis, which comprises three stages occurring cyclically and simultaneously throughout the research process: (1) data condensation the selection, focusing, and simplification of raw data; (2) data display, in the form of matrices, charts, or thematic narratives; and (3) conclusion drawing and verification (Miles, Huberman, & Saldana, 2014: 31–33). Throughout this process, the researcher maintained ongoing reflexivity critical awareness of his own positionality and potential bias not as a fourth analytical stage on par with the three above, but as a validity practice accompanying all of them. Table 1 summarizes how each analytical stage was operationalized in this study.

Table 1. Stages of Data Analysis

Stage	Procedure in This Study	Illustrative Output
Data condensation	Interview transcripts, observation notes, and documents were coded and grouped into categories aligned with the three dimensions of religious literacy (cognitive, affective, praxis) and the study's three objectives.	Initial coding scheme; category lists for MAN 1 Bireuen.
Data display	Coded data were organized into matrices comparing themes across informant groups (teachers, students, and the school leader).	Thematic comparison matrix; thematic narrative summaries.
Conclusion drawing and verification	Emerging themes were cross-checked through member checking, triangulated across data sources, and reviewed with academic colleagues before being finalized.	Verified thematic findings presented in Results and Discussion.

The validity of the data is ensured through triangulation techniques (source, method, and time), member checking, extension of observation, and peer debriefing with academic colleagues.

C. RESULTS AND DISCUSSION

1. The Concept of Religious Literacy in the Perspective of Islamic Education

Religious literacy in the context of Islamic Religious Education is not merely the ability to read and write Arabic texts or memorize verses of the Qur'an, but an integrative competence encompassing cognitive (deep understanding), affective (appreciation and internalization), and conative (practice in real life) dimensions (Daradjat, 2008: 87). Zakiyah Daradjat states that the success of religious education is not measured by how much material students memorize, but by how deeply religious values imprint upon and change their daily behavior (Muhaimin, 2012: 111). In other words, true religious literacy is present when a student is able to read the reality of their life through the lens of Islamic values, engage in critical dialogue between religious texts and contemporary contexts, and make moral decisions based on Islamic principles consistently.

In the findings of this study, PAI teachers interviewed consistently stated that the strongest indicator of increasing students' religious literacy is not exam scores or memorization skills, but rather students' ability to ‘connect’. A senior teacher at MAN 1

Bireuen described this: 'When students are able to look at events in the news with the question: how does Islam respond to this? That's a sign that he has really learned religion, not just learned about religion.' This perspective resonates with Muhaimin's argument that successful religious education enables students to interpret their world through a religious lens (Muhaimin, 2012: 111–112).

2. Integrative Learning Model as a Pedagogical Foundation

The Integrative Learning Model used as a pedagogical foundation in this study refers to Fogarty's theoretical framework, which classifies ten models of curriculum integration (Fogarty, 1991: 6–8). Of these ten models, the two most relevant and most successfully implemented in the context of PAI are the webbed model and the integrated model (Fogarty, 1991: 61, 90). In the webbed model, a relevant central theme such as 'social justice in an Islamic perspective' functions as a 'net' connecting the various strands of PAI content (faith, fiqh, morals, and Islamic history) with other disciplines and contemporary social realities. The integrated model, meanwhile, seeks intrinsic integration between concepts from different disciplines that overlap naturally (Fogarty, 1991: 90–91). Within the Indonesian PAI literature, Tafsir (2011: 49) similarly underscores the relevance of integrative approaches for religious instruction, though the specific typology adopted in this study follows Fogarty's original formulation.

Classroom observations indicated increased student engagement when integrative-based modules were implemented, reflected in the increasing frequency of spontaneous questions from students, the depth of discussion, and their ability to provide examples of the application of religious concepts in real-life contexts. Rusman emphasizes that one of the advantages of integrative learning is its ability to stimulate students' multiple intelligences, because the material is presented from various points of view that support each other (Ministry of Education and Culture of the Republic of Indonesia, 2009: 3). In the digital context, this integration is further strengthened by multimedia features that allow the representation of concepts in various modalities visual, auditory, and kinesthetic through interactive simulations.

3. Characteristics of Interactive Digital Modules in PAI Learning

The interactive digital modules examined in this study exhibit several characteristics that distinguish them from conventional digital modules that simply transfer text to electronic format. First, the module is designed with an integrative content architecture: each unit of material begins with a 'contextual bridge' a short video (two to three minutes) or case study featuring real-life phenomena relevant to the subject matter. This bridge serves to activate students' cognitive schemas while building personal relevance before religious concepts are formally introduced (Smaldino, Lowther, & Russell, 2012: 261). Second, each unit of material is equipped with a 'Cross-Disciplinary Connection' feature that explicitly demonstrates the linkage between PAI concepts and other sciences, contemporary socio-humanitarian issues, or relevant historical events. Third, the module provides an adaptive quiz feature with formative feedback that does not merely assess correctness, but also provides in-depth explanations and relevant verse/hadith references for each answer.

Interview data with students revealed that the most appreciated feature was the online discussion forum integrated into the module, where students could share reflections, questions, and experiences related to the material studied. A grade-XI student stated: 'If I learn from an ordinary book, I only know what is in the book. But from this module, I thought: oh, this has something to do with the news I watched yesterday. I

became curious and kept searching.' This response indicates that the module succeeded in provoking intellectual curiosity and encouraging self-directed learning, one of the characteristics of highly literate learners (Creswell, 2014: 191). This positive reception was echoed broadly across the student interviews: most participants described the module in similarly favorable terms, finding it more engaging than conventional textbook-based instruction, while a smaller number of students expressed reservations about its format. One grade-XI student captured this shift in perception: 'At first I thought PAI lessons were just about reading a thick textbook and memorizing things. But the interactive module our teacher made has video barcodes and quizzes, so learning tajwid and Islamic history feels a lot more exciting and doesn't make me sleepy.' Not all reactions were positive, however: a smaller number of students voiced concern about the module's workload. One student explained: 'The module's design looks good, but the assignments at the end of every chapter are too many and repetitive. We already have other subjects with heavy workloads, so this PAI module actually feels like it adds more burden rather than helping us understand the essence of the material.' This dissenting view suggests that the module's assessment load, rather than its content or interface, was the primary source of resistance among the minority of students who responded less favorably.

4. Supporting Factors and Obstacles to Implementation

The implementation of the Interactive Digital Module based on the Integrative Model did not proceed without obstacles. This study identified several factors that substantially affected the effectiveness of its implementation. Among supporting factors, the most prominent is the pedagogical competence of the PAI teacher concerned. Teachers who successfully facilitate learning with this module are those who are not only technologically literate, but who also understand the principles of integrative learning deeply and are able to act as guiding facilitators rather than merely transmitting teachers (Ismail SM, 2008: 30). The second supporting factor is the availability of adequate technological infrastructure a stable internet network, sufficient devices, and conducive learning spaces. Madrasah that have successfully implemented modules optimally are those that have made consistent digital-infrastructure investments (Djamarah and Zain, 2010: 120).

On the other hand, several inhibiting factors identified warrant serious attention. First, a digital-competency gap among students: not all students possess the same digital literacy skills, so some experience difficulty navigating the module's more complex features (Ainon Mohd and Abdullah Hassan, 2005: 89). Abi Murdani, the PAI teacher who developed the module and used it in his own classroom, echoed this tension directly: 'Teaching with this module is actually far easier and more practical, although some students still find its format and layout hard to follow. Even so, on the whole, developing and using this module has really helped in the classroom.' His account illustrates that the digital-competency gap noted above coexists with genuine pedagogical gains, rather than negating them. Second, the epistemological resistance of some senior teachers, who view the integration of religious content with other disciplines as potentially 'mixing' the sacred with the profane a view that reflects a dichotomy of knowledge still deeply rooted in some madrasah communities. Third, the limited learning time allocated for PAI (typically two lesson hours per week) constrains the full and optimal implementation of integrative module-based learning (Fogarty, 1991: 61).

5. Perceived Changes in Students' Religious Literacy: Qualitative Findings

The most notable finding of this study was the qualitative change observed in the mindset and behavior of students who consistently used integrative digital modules, spanning the three dimensions of religious literacy that were the focus of the analysis. In the cognitive dimension, students demonstrated a greater ability to analyze social phenomena from an Islamic perspective, construct coherent evidence-based arguments, and identify the relevance of Islamic teachings to contemporary issues; participants reported that students no longer simply remembered content, but had begun to analyze and evaluate it (Rusman, 2014: 255).

In the affective dimension traditionally the most difficult to measure teachers reported a noticeable increase in students' enthusiasm and sense of personal relevance toward PAI material. Some students began proactively bringing issues from their real lives into class discussions and relating them to the Islamic perspective they had learned from the modules, suggesting a process of value identification in which students begin to see themselves as subjects engaged with their religious teachings rather than simply as objects receiving doctrine (Majid, 2012: 202). In the conative dimension (praxis), several teacher participants reported observed changes in students' behavior: a more sincere approach to worship, greater sensitivity to social-justice issues, and an improved ability to manage conflict in accordance with Islamic principles. Any claim of a causal relationship between module use and these behavioral changes requires methodological caution in qualitative research; nonetheless, the consistent and recurring patterns across participants' narratives lend support to the plausibility of a meaningful association between the two.

6. Theoretical Relevance and Practical Implications

Theoretically, the findings of this study reinforce the argument that instructional design based on the Integrative Learning Model has strong relevance for the context of PAI, particularly in the goal of building comprehensive religious literacy, and extend it by situating that argument within an interactive digital platform. These findings resonate with Fogarty's view that well-designed curriculum integration not only makes learning more efficient, but also more meaningful, because students are able to perceive the organic connection between what they learn and their real world (Fogarty, 1991: 61–62). In the context of Islamic education, this resonance runs deep, because Islam itself is, in its essence, an integrative religion: it does not separate the affairs of this world from the hereafter, reason from revelation, or the individual from the social.

These findings also differ from prior work in several respects. Whereas Falah et al. (2025) found that digital transformation in PAI often left value internalization contested and difficult to evaluate at the managerial level, the present study's focus on module-level pedagogical architecture suggests that when curriculum integration is built directly into content design rather than treated solely as a downstream training or supervision matter teachers and students in this study appeared to converge more closely in perceiving the module as supportive of value internalization, in contrast to the divergence Falah et al. (2025) observed. Likewise, unlike Sulaiman (2023) and Munadirin, Muslim, and Fatah (2023), whose focus remained on module usability and engagement strategies respectively, this study extends the discussion by treating religious literacy as a multidimensional outcome, allowing its cognitive, affective, and praxis dimensions to be examined separately. This points to a modest theoretical contribution: that the pedagogical architecture of a digital module not only its technical features or engagement

strategies may condition how digital transformation is experienced in religious education.

Practically, this study carries several implications. First, for PAI teachers: the teaching paradigm needs to shift from 'teaching about Islam' to 'guiding students to live with Islam.' Integrative digital modules can support this paradigm shift, provided teachers have adequate competence to facilitate it. Second, for curriculum and policy developers: investment in PAI digital-media development should explicitly require integrative instructional design, not merely content digitization (Moleong, 2017: 326). Third, for madrasah institutions: strengthening technological infrastructure and building teacher capacity must proceed together for the implementation of digital modules to occur optimally and evenly; without a conducive ecosystem, the potential of integrative digital modules is unlikely to be fully realized.

D. CONCLUSION

This study concludes that the implementation of Interactive Digital Modules based on Integrative Learning Models in PAI learning shows considerable potential as a pedagogical instrument for building more comprehensive and authentic religious literacy among students. Based on the qualitative exploration undertaken, three main findings emerge. First, the findings indicate that integrative digital modules have the potential to encourage a transformation in students' learning process from memorizing to internalizing, from passive to active, and from partial to holistic. This is supported by a content architecture that explicitly connects religious material with real-life and cross-disciplinary contexts, allowing students to perceive the personal relevance of what they learn.

Second, the effectiveness of module implementation is strongly shaped by two interrelated factors: the pedagogical competence of teachers as facilitators, and the availability of adequate technological infrastructure. The absence of either factor appears to substantially reduce the module's pedagogical potential. Third, the most fundamental obstacle identified lies not at the technical level, but at the epistemological level: resistance to the concept of knowledge integration, still strong in some madrasah communities, is a cultural challenge that needs to be addressed systemically through dialogue and sustained professional mentoring.

This study is subject to several limitations that should be considered when interpreting its findings. First, it involved only a single school, MAN 1 Bireuen, Aceh, which limits the extent to which these findings can be transferred to other regions or types of institutions. Second, the qualitative case-study design, while well suited to exploring lived experience in depth, does not permit claims about the module's effectiveness relative to alternative approaches, nor does it establish causal relationships between module use and the outcomes reported by participants. Third, this study did not include quantitative measures of religious-literacy outcomes and did not track participants over time; whether the changes reported by teachers and students are durable, and how they might be measured more precisely, remains an open question for future research.

Theoretically, this research contributes to the discourse on PAI instructional design by offering a conceptual framework that connects the Fogarty integrative model with interactive digital platforms in the context of Islamic education. In practical terms, this study underlines the importance of reorienting the PAI learning paradigm from a transmission model toward a transformation model, and suggests that digital technologies, when designed on a strong and integrative pedagogical foundation, may serve as a supportive catalyst for such reform. Future research employing comparative

designs across different levels and socio-cultural contexts, as well as longitudinal studies of the long-term relationship between module use and students' religious character and identity, would help to test and extend the transferability of these findings.

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