

PAI Go Digital: Teacher Innovation in Enhancing Learning Motivation and Engagement among Junior Secondary Students at SMP Negeri 1 Limbur Lubuk Mengkuang

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<p>Article history: Received 08-04-2021 Revised 25-05-2021 Accepted 06-07-2021 Published 29-09-2021</p> <p>How to cite: Zainap, Khamim, S., Adila, U., Hidayah, N. N., Rivaldo, G., & Saputra, R. (2021). PAI Go Digital: Teacher Innovation in Enhancing Learning Motivation and Engagement among Junior Secondary Students at SMP Negeri 1 Limbur Lubuk Mengkuang. <i>Edcomtech: Jurnal Kajian Teknologi Pendidikan</i>, 6(2), 322–332. https://doi.org/10.17977/um039v6i22021p322</p> <p>© The Author(s)  This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License</p>	<p><i>Penelitian ini mengkaji implementasi inovasi pembelajaran PAI Go Digital sebagai strategi guru Pendidikan Agama Islam dalam meningkatkan motivasi dan keterlibatan belajar siswa di SMP Negeri 1 Limbur Lubuk Mengkuang. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus, dilaksanakan selama tiga bulan pada semester berjalan. Subjek penelitian terdiri atas guru PAI dan siswa kelas VII sampai IX yang dipilih secara purposive. Data dikumpulkan melalui observasi partisipatif, wawancara semi terstruktur, dan dokumentasi terhadap artefak digital pembelajaran. Analisis data mengikuti model interaktif Miles, Huberman, dan Saldaña, dengan kredibilitas dijaga melalui triangulasi sumber dan metode serta member checking. Temuan penelitian dirangkum dalam tiga klaster yang saling terkait. Pertama, guru PAI mengembangkan empat untaian strategi yaitu desain konten multimedia, asesmen interaktif berbasis kuis daring, pemanfaatan platform pembelajaran terkurasi, dan fasilitasi pedagogis berbasis scaffolding. Kedua, motivasi belajar siswa meningkat secara konsisten yang ditandai oleh antusiasme yang lebih tinggi, partisipasi aktif dalam diskusi, dan rasa ingin tahu terhadap materi keagamaan. Ketiga, keterlibatan siswa berkembang dari peran pasif menjadi aktif melalui kuis daring, eksplorasi sumber digital, dan kreativitas dalam tugas. Studi ini juga mengidentifikasi kendala struktural berupa keterbatasan konektivitas dan disparitas literasi digital antar siswa, yang ditangani melalui pendampingan guru dan adaptasi media. Penelitian menyimpulkan bahwa PAI Go Digital efektif sebagai inovasi pembelajaran ketika kompetensi guru, desain konten yang relevan, dan dukungan ekosistem sekolah bergerak bersama.</i></p> <p>Kata Kunci: PAI Go Digital; Motivasi Belajar; Keterlibatan Siswa; Pembelajaran Digital; Pendidikan Agama Islam.</p> <p>Abstract This study examines the implementation of the PAI Go Digital instructional innovation as a teacher led strategy to enhance learning motivation and student engagement in Islamic Religious Education at SMP Negeri 1 Limbur Lubuk Mengkuang. A qualitative case study design was employed across three months of fieldwork during the running</p>

	<p>semester. Participants were Islamic Religious Education teachers and grade seven through nine students selected purposively. Data were collected through participatory observation, semi structured interviews, and documentary analysis of digital learning artifacts. Analysis followed the Miles, Huberman, and Saldaña interactive model, with credibility established through source and method triangulation as well as member checking. The findings cluster around three interlocking themes. First, the PAI teachers built a coherent four strand strategy that combined multimodal content design, interactive online assessment, curated learning platforms, and scaffolding based teacher facilitation. Second, student motivation rose consistently, marked by higher enthusiasm, more active participation in classroom discussion, and a renewed curiosity toward Islamic content. Third, engagement shifted from passive listening to active participation through online quizzes, independent exploration of digital resources, and creative task completion. Two structural constraints surfaced as well, namely limited internet connectivity and uneven student digital literacy, both moderated through teacher mentoring and adaptive media choices. The study concludes that PAI Go Digital functions as an effective pedagogical innovation when teacher competence, contextually grounded content design, and school ecosystem support move together.</p>
	<p>Keywords: <i>PAI Go Digital; Learning Motivation; Student Engagement; Digital Learning; Islamic Religious Education.</i></p>

INTRODUCTION

The rapid development of information and communication technology has reshaped many aspects of life, including education. Digital tools no longer serve only as channels for communication or entertainment. They now operate as instructional resources that can support, extend, and enrich classroom learning. Schools are therefore expected to keep pace with technological change so that the teaching and learning process remains effective, engaging, and relevant to the present generation of students (Sulaeman, 2021; Wajdi et al., 2021).

Junior secondary students in Indonesia are particularly close to digital technology. They are accustomed to smartphones, internet platforms, and a wide range of digital applications in their daily life, which opens a clear opportunity for teachers to deploy digital media as a route to higher motivation and stronger participation in school learning (Affandi et al., 2021; Yusoff et al., 2020). Within the broader Islamic education context, this opportunity carries particular weight because the Pendidikan Agama Islam (PAI) subject occupies a central place in shaping student character, ethics, and spiritual values. Students are expected not only to grasp religious content as a body of theory but also to embody those values in everyday conduct.

In practice, however, PAI instruction in many Indonesian schools still leans heavily on teacher centered methods such as lecture and written assignment (Manaf et al., 2025; Septiani et al., 2020). Such restricted variation in instructional design tends to lower student interest, which in turn weakens motivation and limits the depth of engagement. The consequence is a gap between the formative ambition of the PAI curriculum and the lived experience of students in the classroom. Without active engagement, the transfer of religious values from text to practice remains incomplete (Ryan & Deci, 2020; Howard et al., 2021).

The concept of PAI Go Digital is one response to this gap. It is a teacher led innovation that integrates digital media and platforms into PAI instruction, with the aim of producing learning that is more interactive, contextual, and meaningful for students. Through instructional video, multimedia presentation, interactive quizzes, and online learning platforms, teachers can present religious content in forms that match the everyday digital experience of students while preserving the pedagogical and ethical core of the subject (Zh et al., 2025; Idham et al., 2026). At SMP Negeri 1 Limbur Lubuk Mengkuang, the introduction of digital instructional innovation has the potential to lift PAI from a routine recitation of textbook material toward a more dynamic and participative classroom culture.

While the wider literature has examined digital media in religious and general education (Fisher et al., 2018; van Alten et al., 2019; Septiani et al., 2020; Saripudin et al., 2021), there is comparatively little work that captures how a teacher actually constructs and sustains a workable digital strategy in a typical Indonesian junior secondary school setting, where infrastructure is uneven, student digital literacy varies, and the curricular timetable is dense. Studies on integrated educational design in Indonesian Islamic settings (Manaf et al., 2025; Idham et al., 2026) hint at the importance of teacher initiative and contextual fit, yet rarely examine the day to day craft of building motivation and engagement at the classroom level.

This study seeks to fill that gap. The objective of the research is to analyze the implementation of PAI Go Digital at SMP Negeri 1 Limbur Lubuk Mengkuang and to describe how this teacher led innovation relates to the motivation and engagement of grade seven through nine students in PAI lessons. The unit of analysis is the teacher's situated practice as it intersects with student response. The remainder of the article presents the qualitative method used to construct this account, the empirical findings organized around four implementation strands, a discussion that connects those findings to the wider TPACK and self determination literatures, and a conclusion that draws practical and theoretical implications for PAI educators.

METHOD

The study used a qualitative approach with a single site case study design (Creswell & Poth, 2018). The choice of design follows from the research question, which concerns a teacher's situated practice rather than a generalizable causal effect, and from the institutional setting itself, where the rhythm of the school day, the available infrastructure, and the cultural fabric of the classroom together shape the meaning of any digital innovation. A case study allows teacher action, student response, and school context to be held within a single analytic frame.

The site was SMP Negeri 1 Limbur Lubuk Mengkuang, a public junior secondary school located in Bungo Regency, Jambi Province. The school operates the standard national curriculum and serves approximately five hundred students across grades seven, eight, and nine. The school was selected purposively for two reasons. First, the PAI teachers there had begun to use digital learning media in a sustained way, which made the phenomenon under study observable. Second, the school context (modest internet connectivity, mixed student digital literacy, and a shared multimedia room) is broadly representative of many comparable junior secondary schools in Indonesia, which improves the practical relevance of the findings. Fieldwork ran for approximately three months during the running academic semester, covering a complete cycle of unit teaching, formative assessment, and end of unit reflection in the PAI subject.

Informants were selected purposively, with the goal of triangulating the same teaching episodes from multiple vantage points. The informant set comprised two PAI teachers (coded T1 and T2) who taught across grades seven through nine; six students (coded S1 through S6) drawn evenly across the three grade levels and selected with help from the teachers to span the range of engagement observed in class; and one curriculum coordinator (coded P1) whose authority covered scheduling and infrastructure decisions related to digital instruction. Informant codes are used throughout the Results section to preserve confidentiality.

Three data collection techniques were used in combination. Participatory observation took place across multiple PAI lessons in each of the three grade levels. Field notes recorded teacher moves, student verbal and nonverbal response, the use of digital media, technical incidents, and any contextual events that affected the lesson. Semi structured interviews followed a topical guide built around three concerns: the strategy guiding teacher use of digital media, the lived experience of students in those lessons, and the constraints that shaped what was feasible. Each informant was interviewed at least once for sessions of forty to seventy five minutes, recorded with consent and transcribed verbatim. Documentary materials covered lesson plans, sample digital artifacts (slide decks, quiz screenshots, short instructional videos), student digital tasks, and class messaging records.

Data analysis followed the interactive model of Miles, Huberman, and Saldaña (2014). Transcripts and field notes were first condensed through open coding, with codes drawn from the data rather than imposed from a pre set framework. A second cycle grouped these into thematic categories oriented around the research objectives. Displays in the form of thematic matrices crossing teacher action against student response were used to identify patterns across lessons and informants. Conclusions were drawn iteratively, each iteration tested against fresh data and against rival explanations. To strengthen credibility, source triangulation cross checked claims against teacher, student, and coordinator accounts; method triangulation matched interview claims against observed behavior and documentary evidence; and member checking was conducted near the close of fieldwork, with three substantive corrections from informants incorporated into the final analysis. Ethical clearance was obtained through the institutional review process at Institut Agama Islam Yasni Bungo, and student informants provided assent in addition to parental and school consent.

RESULTS

The findings are organized in four interlocking subsections. The first describes the structure of the PAI Go Digital strategy as the teachers actually implemented it. The second reports the changes in student motivation that the strategy produced. The third presents the parallel changes in student engagement. The fourth records the structural constraints that the strategy had to negotiate and the way the teachers responded to them.

Implementation of PAI Go Digital: Four Strand Strategy

Across the three months of fieldwork, T1 and T2 progressively built and refined a coherent four strand strategy for PAI instruction that we summarize as PAI Go Digital. The four strands are analytically distinct yet operate together in practice, and the conceptual relationships among them are visualized in Figure 1.

The first strand was multimodal content design. The teachers produced short instructional videos and multimedia slides covering Aqidah, Akhlak, Fiqh, Qur'an Hadith, and Sejarah Kebudayaan Islam topics in the running curriculum. Content design followed two principles. The first was concision: each digital segment was kept short, typically under five

minutes, so that it could be inserted into the existing class period without consuming it whole. The second was contextual binding: every abstract concept was paired with at least one concrete contemporary scenario before any classical reference was introduced, which lowered the perceived distance between the religious content and the lived world of the student.

The second strand was interactive assessment. The teachers used online quizzes, gamified Wordwall activities, and Liveworksheets exercises both as formative checks and as engagement devices. The gamified format gave students rapid feedback, normalized brief failure, and surfaced misconceptions in time for the teacher to address them within the lesson rather than at the next exam (Zh et al., 2025).

The third strand was the use of curated online learning platforms. The teachers established a controlled class messaging channel for sharing materials and announcements, and used Google Classroom to host assignments and additional reading. Carefully curated external sources, including selected YouTube channels and publicly available Islamic education portals, extended the reach of the lesson beyond the classroom while staying within the boundaries the school could supervise.

The fourth strand was teacher facilitation. Across all three other strands, the teacher remained the central pedagogical figure rather than retreating behind the screen. The teacher introduced each digital segment with a framing question, scaffolded student engagement during the activity, debriefed afterward, and connected the digital experience back to the broader unit narrative. The four strands together formed an integrated strategy rather than a sequence of disconnected tools.

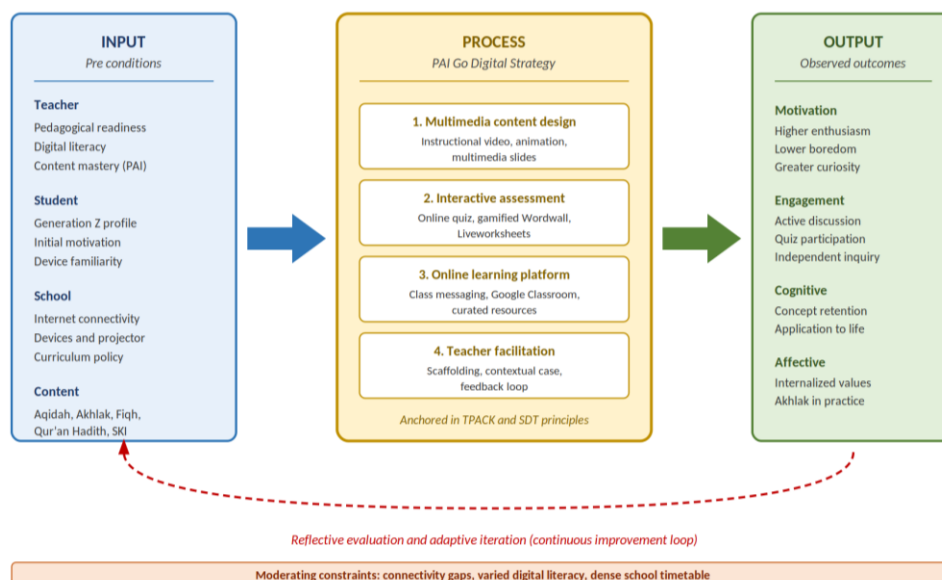


Figure 1. PAI Go Digital conceptual framework integrating input, process, output, and feedback loop.

Motivation Shifts in PAI Lessons

The implementation of PAI Go Digital was associated with a consistent shift in the motivational profile of students across all three grade levels. Three changes appeared in both observation and interview data. First, classroom enthusiasm rose. Students arrived at PAI lessons with visibly higher attention, asked more questions during the digital segments, and

showed less of the early lesson disengagement that had been common at baseline. Second, perceived boredom dropped. In interviews, students contrasted the new format with the previous reliance on lecture and written task, describing the digital format as more lively and easier to follow.

Third, curiosity toward the subject matter expanded. Several students reported that they had begun to look up additional material on their own outside the classroom, particularly through video platforms. T1 framed this change in motivational rather than merely behavioral terms, observing that students were no longer asking what would be on the test but were beginning to ask what a particular ethical concept actually meant in their own lives. The pattern is consistent with the empirical literature on personalized and digital learning, which reports that thoughtfully designed digital media can support the psychological needs that underlie sustainable motivation (Ryan & Deci, 2020; Hsu et al., 2019; Alamri et al., 2020).

Engagement Shifts in PAI Lessons

Engagement, defined here as observable participation in the activities of the lesson, shifted in parallel with motivation. The participatory observation log captured three patterns. First, classroom participation broadened. Quiz based segments, in particular, drew responses from students who had previously remained silent through whole lectures. Second, the quality of student contribution changed. Student answers moved from short factual recall toward longer explanations that drew on the contemporary scenarios used in the digital segments, and several students began to bring their own examples into discussion without prompting.

Third, students began to take initiative outside the formal lesson. Several students used digital tools (presentation apps, basic video editing tools, and shared documents) to complete and extend their assigned tasks. The shift from passive listener to active participant is consistent with the wider engagement literature on flipped and blended designs (Fisher et al., 2018; van Alten et al., 2019; Cevikbas & Kaiser, 2021), and corroborates similar findings in Indonesian Islamic education contexts (Septiani et al., 2020; Saripudin et al., 2021).

Structural Constraints and Adaptive Response

Two structural constraints surfaced repeatedly during fieldwork. The first was uneven internet connectivity. The school's shared bandwidth could not always sustain video streaming for an entire class simultaneously, which forced T1 and T2 to download materials in advance and to plan offline capable activities for sessions when bandwidth was unreliable. The second was variation in student digital literacy. While most students operated familiar tools fluently, a smaller group, concentrated in grade seven, struggled to navigate the quiz platforms or to upload completed tasks. The teachers responded with brief tool focused mini sessions and with peer pairing arrangements that placed less confident students alongside more confident peers.

These constraints did not derail the strategy, but they did shape its practical form. The teachers explicitly chose lower bandwidth tools where possible, kept hard copy backups for assessment, and treated the moments of technical difficulty as occasions to model adaptive problem solving rather than as failures to be hidden. The strategy that emerged was therefore shaped as much by infrastructure fit as by pedagogical ambition (Quaicoe & Pata, 2020; Sánchez Cruzado et al., 2021).

DISCUSSION

The findings of this study contribute to three intersecting bodies of literature: the TPACK framework on teacher knowledge, self determination theory as applied to educational motivation, and the empirical literature on flipped and blended learning, especially in resource constrained environments. Read against these literatures, the case offers three specific contributions.

The first contribution concerns the TPACK framework. The teachers in this study did not arrive at PAI Go Digital by applying the seven TPACK domains as predefined categories. They arrived at it by repeatedly asking how a particular PAI concept could be represented better. This bottom up construction matches the route to integrated technological pedagogical competence described by Tondeur et al. (2019) and Tseng et al. (2020), and aligns with Falloon's (2020) argument that teacher digital competence is best understood as a holistic capacity rather than a stack of separate skills. In an Indonesian context where formal professional development on educational technology is often limited (Quaicoe & Pata, 2020), the case demonstrates that self directed TPACK growth driven by content concerns is a realistic path even for teachers in geographically peripheral schools.

The second contribution is to the motivation literature. The shifts observed in students (rising enthusiasm, declining boredom, expanding curiosity, and the move from passive recall to active explanation) are not best read as a simple effect of more interesting media. Read through self determination theory (Ryan & Deci, 2020; Howard et al., 2021), the strategy worked because it addressed the three basic psychological needs that the prior lecture only format had left underfed. *Competence* was supported by chunked, scaffolded design and by formative quizzes that gave rapid feedback. *Autonomy* was supported by case based discussion that invited students' own interpretations and by independent exploration of curated digital sources. *Relatedness* was supported by contemporary scenarios that recognized the lived world of students and by the teachers' visible response to student input. The empirical literature on personalized digital learning environments reports the same mechanism in different settings (Hsu et al., 2019; Alamri et al., 2020). What this case adds is the demonstration that all three needs can be addressed simultaneously through a single coordinated digital strategy in a typical Indonesian junior secondary PAI classroom.

The third contribution is to the literature on flipped and blended learning, particularly to the question of how those models adapt in resource poor or device restricted environments. The meta analytic evidence (van Alten et al., 2019) and individual studies in secondary settings (Cevikbas & Kaiser, 2021; Florence & Kolski, 2021; Talan & Gulsecen, 2019; Attard & Holmes, 2020) consistently report that flipped and blended designs raise engagement when the pre class component is genuinely engaged with by students and when class time is repurposed for higher order activity. The PAI Go Digital case at SMP Negeri 1 Limbur Lubuk Mengkuang is informative because the strategy preserved the underlying pedagogical logic of these models even though one to one student device access was unavailable. Class messaging, shared resources, and brief in class digital segments together substituted for the conventional individualized pre class component. The case suggests that the active ingredient in flipped and blended designs is not the device through which the pre class material is accessed, but the structural shift of class time toward discussion and case work.

Beyond these three contributions, the case carries two practical design principles for other PAI teachers and schools. The first is the principle of contextual binding before classical reference. Introducing a contemporary case before a classical category produced consistently

more engaged discussion than the reverse order, which echoes the value based digital media literature (Saripudin et al., 2021; Komalasari & Saripudin, 2019; Septiani et al., 2020) and aligns with strategic integration models proposed for Indonesian Islamic education (Manaf et al., 2025). The second is the principle of infrastructure fit design. The strategy worked because the teachers calibrated each design choice to actual school constraints rather than designing as if those constraints did not exist (Kerkhoff & Makubuya, 2021). Schools that import digital pedagogies designed for high resource settings without similar calibration are likely to find that the imported strategy fails for reasons that have less to do with pedagogy than with fit.

The case has limitations that frame the strength of its claims. The single site design limits transferability; the three month window does not test whether the gains hold over a longer arc; and the strategy's dependence on two motivated teachers raises a familiar sustainability question. The findings should be read as a worked example of a teacher led strategy that fit its setting, not as a generalizable causal model. Future research could productively follow two directions: longitudinal tracking of whether motivational and engagement gains translate into sustained internalization of Islamic ethical content over the full junior secondary cycle, and comparative case work across multiple schools to test which elements of PAI Go Digital travel and which are site specific.

CONCLUSION

This study set out to understand how PAI teachers at SMP Negeri 1 Limbur Lubuk Mengkuang design and enact digital instructional innovation, and how that innovation relates to student motivation and engagement. Five points summarize the findings. First, the teachers built a coherent four strand strategy that combined multimodal content design, interactive online assessment, curated online platforms, and active teacher facilitation. The four strands were analytically distinct yet operationally integrated. Second, the strategy produced consistent and observable shifts in student motivation. Enthusiasm rose, boredom dropped, and curiosity toward Islamic content widened beyond the formal lesson. Third, the strategy produced parallel and equally observable shifts in student engagement. Participation broadened, the quality of contribution rose, and students began to take initiative through digital tools without being prompted. Fourth, two structural constraints (uneven connectivity and varied student digital literacy) shaped the strategy in important ways but did not derail it. The teachers responded by choosing lower bandwidth tools, keeping hard copy backups, and providing brief peer based scaffolding. Fifth, the durability of PAI Go Digital depends on the school ecosystem at least as much as on the individual teachers. For PAI staff, the case suggests that competence building should start from a concrete content problem, that contemporary cases work better as the opening move than classical references, and that meaningful pre class engagement can be achieved without requiring student device access. For school leaders, the case argues for modest infrastructural investment calibrated to actual classroom needs rather than aspirational replication of high resource models. For researchers, the open questions concern longitudinal durability, cross site transferability, and the specific mechanisms through which contextual binding raises both motivation and the quality of religious reflection.

Digital instructional materials are not, in themselves, a solution to motivation and engagement gaps in PAI. They become a solution when teachers carry the technological pedagogical competence to design them well, when the design is bound to the actual moral and intellectual world of students, and when the school adapts its rhythms enough to let that

design breathe. Under those conditions, PAI Go Digital is a viable pathway to a more meaningful encounter between Islamic content and the students of the digital generation.

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