

*Digital Learning Media Innovation in Social Studies Education at Madrasah: A Literature Review*Arista Dwi Saputri ^{a,1,*}, Labib Muzaki Shobir ^{a,2}, Risa Fitria ^{a,3}, Zulfa Husnawati ^{a,4}^a Universitas Islam Negeri Sayyid Ali Rahmatullah Tulungagung^{1*} AristaDwiSaputri@uinsatu.ac.id² labib.muzaki@uinsatu.ac.id³ risa.fanani@gmail.com⁴ zulfahusnawati@uinsstu.ac.id

* Corresponding Author

Abstract

Social studies (IPS) instruction in madrasah, Indonesia's Islamic basic and secondary education institutions, carries a dual mandate: delivering the national social studies curriculum while embedding Islamic values within teaching and learning. Yet IPS is frequently perceived by students as memorization-heavy and unengaging, a challenge that innovative learning media may help address. This article presents a literature review examining how digital and media-based learning innovations, including animated video, interactive multimedia, e-booklets, and virtual reality, can be applied to strengthen IPS instruction within madrasah settings. Thirty peer-reviewed sources published between 2016 and 2025 were thematically analyzed and organized into four clusters: (1) evidence for video- and animation-based learning media, (2) media innovation specifically within IPS instruction, (3) pedagogical foundations including motivation, constructivism, and technological pedagogical content knowledge (TPACK), and (4) institutional and teacher-level support for technology integration. The review finds consistent evidence that well-designed digital media improves student motivation, activity, and learning outcomes across subjects and levels, and that comparable gains have been documented specifically within IPS classrooms. A case study of Kurikulum Merdeka implementation at a madrasah aliyah further indicates that social studies content can be taught in alignment with religious values without sacrificing curricular rigor. The review concludes that digital learning media innovation offers a practical, evidence-based pathway for madrasah to strengthen IPS instruction while preserving their distinctive religious-values mission, and it recommends further classroom-based research conducted directly within madrasah settings.

Keywords: digital learning media, social studies education, madrasah, Islamic education, literature review

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**1. Introduction**

Madrasah occupy a distinctive place within Indonesia's education system. Operating under the Ministry of Religious Affairs alongside the Ministry of Education, Culture, Research, and Technology, madrasah are required to deliver the full national curriculum while additionally embedding Islamic studies (Pendidikan Agama Islam) and Islamic values across the broader curriculum. Social studies, known nationally as Ilmu Pengetahuan Sosial (IPS), sits at the center of this dual mandate. As a subject that integrates geography, history, economics, sociology, and civics, IPS is a natural site for connecting national citizenship content with religious and moral formation, and Indonesian curriculum reform under Kurikulum Merdeka has reinforced expectations that subject content be taught in ways that are contextual, meaningful, and value-integrated rather than purely transmissive.

In practice, however, IPS instruction continues to face a well-documented engagement problem. The subject is often delivered through lecture-based, textbook-driven methods that emphasize memorization of facts, dates, and definitions over inquiry or application. Students frequently report lower motivation toward IPS relative to other subjects, and teachers report difficulty sustaining active participation across a curriculum that is broad in content but limited in instructional time. This pattern is not unique to IPS; a substantial body of educational research links low motivation directly to weaker learning outcomes and achievement more broadly (Julia & Hayati, 2022), and comparative studies of instructional approach have repeatedly shown that constructivist, learner-centered methods outperform traditional transmissive teaching on measures of student learning (Anggraini & Puspita, 2024; Salsabila & Muqowim, 2024).

One response to this engagement problem, accelerated substantially by the shift to remote and blended learning during and after the COVID-19 pandemic, has been the growth of digital and media-based learning innovation. Animated video, interactive multimedia, e-booklets, motion graphics, and even immersive technologies such as virtual reality have moved from novelty to mainstream instructional tools across basic and higher education. A growing literature demonstrates that such media, when designed around sound instructional principles such as the cognitive theory of multimedia learning, can measurably improve student motivation, engagement, and achievement (Cavanagh & Kiersch, 2022; Afrilia et al., 2022). Reviews of video-based instruction report consistent advantages for learner attention and retention, alongside practical caveats about production quality and appropriate use (Long et al., 2023).

Within Indonesia specifically, this evidence base has begun to extend into IPS classrooms. Studies of animated video, index card match activities, and other media-supported strategies applied directly to IPS content report improvements in student activity and learning outcomes at both elementary and junior secondary levels (Nurhaniah, 2023a, 2023b; Manurung et al., 2025). At the same time, research examining curriculum implementation within madrasah itself has begun to document how national subject content, including IPS, can be delivered in alignment with religious values without diluting academic rigor. A case study of Kurikulum Merdeka implementation at Madrasah Aliyah Darun Najah, for instance, examined precisely this alignment between IPS (economics) content and religious values in practice (Fadli et al., 2025).

What remains comparatively underdeveloped is a synthesis that connects these two strands directly: the substantial and growing evidence base on digital learning media innovation on one hand, and the specific instructional context of IPS teaching within madrasah on the other. Much of the existing literature on learning media innovation is generic to basic education broadly, without particular reference to institutions that must simultaneously satisfy national curriculum standards and a religious-values mission. Conversely, literature on madrasah curriculum implementation has tended to focus on policy and values-alignment questions rather than on the specific pedagogical tools available to support engagement. This article addresses that gap.

The stakes of this instructional challenge are not marginal. Indonesia's madrasah system encompasses a large number of institutions spanning the madrasah ibtidaiyah, tsanawiyah, and aliyah levels, serving millions of students under the coordination of the Ministry of Religious Affairs. IPS is taught as a compulsory subject across all of these levels, meaning that whatever instructional strategies madrasah adopt for IPS reach a substantial share of Indonesia's school-age population. Improving engagement and outcomes in this subject therefore carries implications well beyond any single classroom, both for national learning-outcome targets and for how effectively madrasah fulfill their founding purpose of producing graduates who are simultaneously academically capable and grounded in Islamic values.

The purpose of this literature review is therefore to synthesize existing research on digital and media-based learning innovation and examine its relevance and applicability to IPS instruction within madrasah settings. Specifically, the review asks: (1) what does the existing literature show about the effectiveness of digital and video-based learning media in basic and secondary education; (2) how has media innovation specifically been applied within IPS instruction; (3) what pedagogical and motivational foundations support these innovations; and (4) what institutional and teacher-level conditions support their successful adoption. By organizing the

literature around these questions, this review aims to provide madrasah educators and policymakers with an evidence-based reference point for strengthening IPS instruction while preserving the distinctive religious-values mission of Islamic education institutions.

2. Methods

This article adopts a qualitative literature review (*studi kepustakaan*) design rather than an empirical field study. The design was selected because the purpose of the article is synthesis: to organize and interpret existing published evidence on digital learning media innovation and its relevance to IPS instruction in madrasah, rather than to collect new primary data from students, teachers, or classrooms. Readers should therefore treat the findings reported below as a synthesis of prior published research, not as new empirical results.

The source pool for this review consists of thirty peer-reviewed journal articles and conference proceedings, published between 2016 and 2025, managed and exported using a reference management application in the manner recommended for scientific writing (Zotero/Mendeley-type tools). Sources were selected on the basis of thematic relevance to three overlapping domains: (a) digital and media-based learning innovation (video, animation, multimedia, virtual reality, e-booklets, and related formats), (b) IPS or social-studies-adjacent instruction at the elementary and secondary level in Indonesia, and (c) pedagogical or motivational theory relevant to explaining why such media innovations succeed or fail in classroom settings. Both Indonesian-language studies situated in national basic-education contexts and international English-language studies were included, on the premise that pedagogical mechanisms documented internationally (for example, the cognitive load and dual-channel principles underlying multimedia learning) are generalizable to the Indonesian madrasah context even where the specific studies were not conducted in Indonesia.

Sources were analyzed thematically. Each source was read for (1) its subject area and educational level, (2) the specific media or instructional innovation studied, (3) the outcome variables examined (for example, motivation, activity, or learning outcomes), and (4) its relevance to either the IPS curriculum specifically or to religiously-affiliated (madrasah) instructional contexts. Sources were then grouped into four thematic clusters, presented in the Results and Discussion section: (1) evidence for digital and video-based learning media broadly, (2) media innovation applied specifically within IPS instruction, (3) pedagogical and motivational foundations (constructivism, TPACK, cooperative learning, and related theory), and (4) institutional and teacher-level conditions supporting technology integration. Within each cluster, findings were synthesized narratively to identify points of convergence across studies and to draw out implications specific to the madrasah context.

This approach has clear limitations that should be stated openly. As a literature review, this article does not report new data collected from madrasah classrooms, students, or teachers, and the conclusions drawn are therefore necessarily indirect: they infer applicability to the madrasah IPS context by analogy from studies conducted in other, mostly non-madrasah, settings. The review also relies on the level of detail available in the reviewed sources' titles, abstracts, and reported outcomes rather than full replication of their statistical results. These limitations motivate the recommendation, developed further in the Conclusion, that the synthesis offered here be treated as a foundation for future classroom-based research conducted directly within madrasah settings.

3. Result and Discussions

Evidence for Digital and Video-Based Learning Media

A substantial cluster of the reviewed literature addresses the effectiveness of digital, video-based, and animated learning media across a range of subjects and educational levels, and the overall pattern across these studies is consistent: well-designed media interventions are associated with improvements in student motivation, engagement, or learning outcomes relative to conventional instruction. At the elementary level, animated video-based media has been reported to increase learning motivation among fourth-grade students (Afrilia et al., 2022), while locally-grounded animated video built around Powtoon and local-wisdom content has been

linked to improved learning outcomes in integrated science and social studies (IPAS) instruction, also at the fourth-grade level (Manurung et al., 2025). Instructional video has similarly been reported to improve learning outcomes on a specific mathematics topic, division, among fourth-grade students (Muin, 2024), and to improve narrative writing skills among fifth-grade students (Sari et al., 2019).

Beyond elementary mathematics and language instruction, video- and animation-based media have been applied to more specialized or applied content areas, including health education, where a motion-graphic instructional video on anemia was developed for adolescent audiences (Puriningsih et al., 2025), and science content, where an engaging whiteboard-animation video was developed to teach vitamins (Purwaningsih & Anggraeni, 2021). Interactive video embedded within presentation software has also been studied specifically in mathematics instruction, with reported improvements in learning outcomes (Anwar et al., 2020). Taken together, this pattern across subject areas, from division and vitamins to anemia and narrative writing, suggests that the instructional benefit of video and animation is not narrowly confined to a single content domain but reflects a more general property of well-designed multimedia instruction.

This general pattern is consistent with theoretical explanations offered elsewhere in the literature. Cavanagh and Kiersch (2022) apply the cognitive theory of multimedia learning to explain why commonly-available technologies can be used to create effective online multimedia lessons, arguing that media which appropriately manages learners' cognitive load, by combining visual and verbal channels without overloading either, produces stronger learning than text or lecture alone. A broader review of video use in education similarly concludes that video offers real advantages for learner attention and retention, while also noting disadvantages that require attention in practice, including production quality, appropriate length, and the risk of passive viewing if video is not paired with active tasks (Long et al., 2023). Outside the Indonesian basic-education context, video-clip-based instruction has also been shown to support motivation building among secondary-level English-as-a-foreign-language learners (Park & Jung, 2016), and technology more broadly has been shown to play a substantial role in literacy instruction at the elementary level, provided it is integrated thoughtfully into instructional routines rather than used as a stand-alone add-on (Taylor et al., 2020).

Not all media innovation in this cluster is video-based. E-booklet media, evaluated in the context of online sociology instruction, has also been found effective in improving student learning outcomes (Violla & Fernandes, 2021), suggesting that the underlying benefit of digital media is not limited to moving-image formats. At the more technologically intensive end of the spectrum, immersive virtual reality mini-games have been examined for their capacity to foster computational thinking in higher education, with findings pointing to meaningful relationships between students' perceptions of the technology, the pedagogy surrounding it, and their cognitive engagement (Agbo et al., 2023), while digitally-delivered, practicality-tested media such as an e-chemistry magazine (E-Chemagz) built around a chemoentrepreneurship approach has demonstrated validity and practicality for improving chemical literacy (Aspari & Andromeda, 2025). Together, these studies indicate that the evidence base for digital learning media extends well beyond simple video and into more elaborate, purpose-built digital tools, and that formal validity and practicality testing, not just outcome measurement, is an established part of how this literature evaluates new media.

These gains should not be read as unconditional. Several of the studies reviewed here point to boundary conditions that matter for implementation. Long et al. (2023) caution that video's advantages depend on production quality and are undermined when video is used passively rather than paired with active tasks, while Cavanagh and Kiersch (2022) note that multimedia benefits are conditional on cognitive-load management rather than an automatic property of digital delivery. For madrasah specifically, a further boundary condition deserves mention: many madrasah, particularly in rural areas, operate with more limited digital infrastructure and device access than urban public schools, so the practical starting point for media adoption may need to prioritize lower-bandwidth formats, such as e-booklets and offline video, already documented as

effective elsewhere in this cluster (Violla & Fernandes, 2021), over more infrastructure-intensive tools such as immersive virtual reality (Agbo et al., 2023).

Media Innovation Specifically Within IPS Instruction

A second, more targeted cluster of literature applies media and instructional innovation directly within IPS or IPS-adjacent classrooms, and it is this cluster that bears most directly on the present review's focus. Nurhaniah (2023a) reports that instructional video applied to a specific IPS topic, Indonesia's natural resource and maritime potential, improved both student activity and learning outcomes among seventh-grade students. In a separate study of a different seventh-grade class at the same school, Nurhaniah (2023b) reports comparable gains in activity and learning outcomes using a different instructional strategy, the Index Card Match method, again within IPS instruction. Read together, these two studies suggest that the engagement problem long associated with IPS is responsive to more than one kind of instructional innovation, whether media-based or activity-based, provided the innovation actively involves students rather than positioning them as passive recipients of content.

Other studies in this cluster document improvements in IPS achievement using structured pedagogical models rather than media per se. Janah and Salamah (2022) report improved IPS learning achievement among eighth-grade students following implementation of the Science Technology Society (STS) instructional model, an approach that explicitly connects social studies content to real-world technological and societal issues. This finding is complementary to the media-focused studies above: it suggests that the instructional framing of IPS content, not only the medium through which it is delivered, plays an independent role in student engagement and achievement.

At a more foundational level, two sources in this cluster examine how IPS itself is conceptualized and has developed as a field within Indonesian education. Nurjanah et al. (2021) revisit the basic conceptual foundations of social science within education, offering a reminder that IPS is not simply a container for disconnected facts about geography, history, economics, and civics but an integrated field oriented toward developing students' social understanding and citizenship. Fauziah et al. (2022) trace the development of IPS education in Indonesia specifically at the elementary school level, documenting how the subject's curricular positioning and pedagogical expectations have evolved over time. Both sources provide useful conceptual grounding for interpreting the more applied, classroom-level studies elsewhere in this review: they clarify that engagement-oriented innovations such as video or activity-based methods are not merely add-ons to IPS instruction but arguably a better fit to the subject's integrative, socially-oriented nature than the memorization-heavy delivery it is often given in practice.

The most directly relevant source in the entire reviewed set, for the specific purposes of this article, is Fadli et al.'s (2025) case study of Kurikulum Merdeka implementation at Madrasah Aliyah Darun Najah, which examined the alignment between IPS (economics) education and religious values within an actual madrasah setting. This study is significant for two reasons. First, it demonstrates empirically that IPS content and Islamic values integration are not in tension with one another under Kurikulum Merdeka's more flexible, contextual curriculum design; economics content, a subject area with no inherent religious content, was found to be teachable in ways that meaningfully connect to religious values without displacing the economics content itself. Second, it provides a concrete institutional anchor for the argument developed throughout this review: if IPS content can already be aligned with religious values at the curriculum-design level, the same madrasah context should, in principle, be equally receptive to the digital and media-based instructional innovations documented in the wider literature, provided those innovations are adapted with attention to the same values-integration goals documented by Fadli et al. (2025).

It is also worth noting the range of educational levels represented across this cluster, from elementary IPAS instruction (Manurung et al., 2025) through junior secondary IPS classrooms (Nurhaniah, 2023a, 2023b; Janah & Salamah, 2022) to senior secondary economics instruction within a madrasah aliyah (Fadli et al., 2025). This range matters for madrasah specifically, which operate across all three levels, *ibtidaiyah*, *tsanawiyah*, and *aliyah*, under a single religious-values mission. The consistency of positive findings across this age range suggests that engagement-

oriented innovation in IPS is not a strategy suited only to younger learners who might simply respond well to video, but a pattern that appears to hold as students progress toward more abstract, exam-oriented content such as economics at the aliyah level.

Pedagogical Foundations: Motivation, Constructivism, and TPACK

A third cluster of the reviewed literature does not examine specific media or subjects but instead establishes the pedagogical and motivational theory that explains why the innovations documented above tend to work. Motivation emerges as a recurring construct across this cluster. Julia and Hayati (2022) report a direct influence of motivation on university students' learning outcomes and achievement, a finding consistent with the elementary-level motivation gains reported for animated video media elsewhere in this review (Afrilia et al., 2022). At the same time, motivation is not simply a fixed trait that media either activates or fails to activate; it interacts with classroom climate more broadly. Cui et al. (2021) report that perceived teacher enthusiasm dampens class-related boredom among college students over time, mediated by students' perceived value of the learning task, suggesting that teacher affect and instructional design work together, rather than either factor operating independently, to sustain engagement.

Constructivist learning theory provides a second major theoretical thread. Anggraini and Puspita (2024) directly compare constructivist and traditional instructional approaches within science (IPA) education and report better learning outcomes under the constructivist approach, a finding that parallels the traditional-versus-innovative contrast running throughout this review's IPS-focused literature. Salsabila and Muqowim (2024) extend this thread by examining the correlation between Lev Vygotsky's constructivist learning theory specifically and the problem-based learning (PBL) model, reinforcing that PBL and related learner-centered strategies are not simply popular trends but are grounded in a coherent theoretical account of how students construct knowledge socially. This theoretical grounding is echoed in Lenkauskaitė et al.'s (2020) study of students' social construction of knowledge through cooperative learning, which similarly frames peer interaction, not solitary content delivery, as central to how understanding is built. Group-based and interactive strategies are further supported by Syukri et al. (2021), who document both the benefits and the practical challenges of group discussion in a syntax-focused academic project, offering a useful reminder that collaborative pedagogy, like media innovation, brings implementation challenges alongside its benefits.

A final theoretical strand in this cluster concerns teachers' capacity to integrate technology meaningfully rather than superficially. Ismail et al. (2023) examine the integration of technological pedagogical and content knowledge, widely known as TPACK, within 21st century learning, a framework increasingly used to describe the specific combination of subject expertise, pedagogical skill, and technological fluency that teachers need in order to use digital media well rather than merely use it. Strong (2023), working in the context of English-as-a-second-language vocabulary instruction, adds a complementary cognitive perspective by examining retrieval, repetition, and retention as vocabulary acquisition strategies, a reminder that the learning-science principles underlying effective instruction, active retrieval and spaced repetition among them, apply across subject areas and are not specific to any one medium. Together, this cluster indicates that the media-based gains documented in the first two clusters of this review are not free-standing effects of technology itself; they depend on motivation, constructivist design, teacher affect, and genuine TPACK-level integration, all of which madrasah would need to cultivate deliberately alongside any specific media adoption.

This distinction matters directly for how madrasah might approach media adoption in practice. Purchasing or producing video, animation, or interactive content without parallel investment in teachers' TPACK development risks reproducing the same passive, transmissive dynamic that motivated the search for innovation in the first place, simply delivered through a screen rather than a textbook. The pedagogical foundations reviewed in this cluster therefore function less as optional background theory and more as a precondition: media innovation is more likely to yield the gains documented in Clusters 1 and 2 when it is designed and delivered by teachers who understand not just how to operate the technology, but why a given media choice serves a specific motivational or constructivist purpose within a given IPS lesson.

Institutional and Teacher-Level Support for Technology Integration

The fourth and final cluster of reviewed literature shifts attention from the classroom to the institutional conditions that make media and pedagogical innovation possible in the first place. Purwanti and Puspitasari (2021) examine teachers' perceptions of lesson study implementation, a collaborative professional development model in which teachers jointly plan, observe, and reflect on lessons, and their findings point to lesson study as a mechanism through which teachers can develop and refine innovative practices, including media use, collectively rather than in isolation. This is a particularly relevant finding for madrasah, where teachers must simultaneously master subject content, pedagogical innovation, and values-integration goals, since collaborative structures such as lesson study offer a way to distribute that developmental burden across a teaching staff rather than leaving individual teachers to develop expertise alone.

School leadership also plays a documented role. Purwanti et al. (2025) examine the managerial role of the school principal in learning quality at an elementary school, with findings indicating that principal leadership is a meaningful lever for instructional quality rather than a purely administrative function. Applied to the madrasah context, this suggests that successful adoption of digital learning media is unlikely to be solely a matter of individual teacher initiative; it is also likely to depend on whether madrasah leadership actively supports, resources, and monitors the integration of new instructional media into IPS teaching.

Finally, several sources already discussed above under other clusters also speak to institutional readiness for technology integration specifically. The immersive virtual reality study conducted in higher education (Agbo et al., 2023) illustrates that even technologically ambitious innovations depend on students' and institutions' readiness to engage with the underlying pedagogy, not simply the availability of the technology itself, while the validity-and-practicality testing methodology applied to the E-Chemagz digital resource (Aspari & Andromeda, 2025) illustrates a broader point relevant to any madrasah considering new media: that digital learning tools intended for real classroom use benefit from being tested for institutional and practical feasibility, not evaluated on learning outcomes alone.

It is worth noting that none of the studies in this fourth cluster were conducted within madrasah specifically, which is itself informative: institutional-support research on Indonesian basic education has, to date, focused predominantly on public general schools rather than on the religious-affiliated sector, even though madrasah educate a substantial share of Indonesian students under a distinct governance structure. This gap reinforces the case, developed further in the Conclusion, for future institutional-level research conducted specifically within madrasah, examining how lesson study, principal leadership, and related support structures operate under Ministry of Religious Affairs governance and within a values-integrated instructional mission.

Synthesis: Implications for IPS Instruction in Madrasah

Read as a whole, the four clusters of literature reviewed above converge on a coherent, if indirect, argument. Digital and media-based learning innovation has a substantial and consistent evidence base across subjects and educational levels (Cluster 1), and this evidence base already extends into IPS instruction specifically, with documented gains in student activity and learning outcomes (Cluster 2). These gains are explainable by, and dependent on, established motivational and constructivist theory as well as genuine teacher TPACK competence rather than technology use alone (Cluster 3), and their successful adoption depends on institutional conditions, including collaborative professional development and supportive school leadership, that extend beyond any individual classroom (Cluster 4).

For madrasah specifically, the case study evidence that IPS content can already be aligned with religious values at the curriculum level (Fadli et al., 2025) suggests that the remaining task is primarily one of extension and adaptation rather than invention from scratch: existing, well-evidenced media innovations from Cluster 1 and Cluster 2 could plausibly be adapted for madrasah IPS classrooms by pairing them with the values-integration approach already demonstrated at the curriculum level, provided this adaptation is accompanied by the theoretical grounding in Cluster 3 and the institutional support documented in Cluster 4. Doing so would allow madrasah to pursue the same engagement and achievement gains documented in the wider

literature without treating religious-values integration and instructional innovation as competing priorities.

Translated into more concrete terms, this argument suggests a plausible sequence for madrasah considering instructional innovation in IPS. A reasonable starting point would combine relatively low-infrastructure media already validated in this literature, such as instructional video or e-booklets, with an explicit values-integration framing modeled on the Kurikulum Merdeka case study reviewed above (Fadli et al., 2025), then build institutional capacity through lesson-study-style collaboration among IPS teachers (Purwanti & Puspitasari, 2021) supported by active principal engagement (Purwanti et al., 2025). More technologically ambitious tools, such as virtual reality or bespoke digital resources modeled on validity-tested materials like E-Chemagz (Aspari & Andromeda, 2025), could reasonably follow once this foundation of teacher capacity and institutional support is in place, rather than being adopted as a first step.

At the same time, this synthesis should be read with appropriate caution. With the partial exception of Fadli et al. (2025), none of the studies reviewed here were conducted within a madrasah setting, and none examined digital learning media specifically within an IPS-and-religious-values-integrated classroom. The argument developed in this section is therefore a reasoned extension of the existing literature rather than a direct empirical finding, and it should be treated accordingly by madrasah educators and policymakers who wish to act on it.

4. Conclusion

This literature review set out to examine how digital learning media innovation might be applied to strengthen IPS instruction within madrasah, institutions that must simultaneously deliver national curriculum content and embed Islamic values in teaching and learning. Drawing on thirty peer-reviewed sources organized into four thematic clusters, the review finds consistent evidence that digital and video-based learning media, including animation, interactive multimedia, e-booklets, and more technologically elaborate tools such as virtual reality, are associated with improved student motivation, activity, and learning outcomes across subjects and educational levels, and that comparable gains have already been documented specifically within IPS classrooms. These gains rest on established motivational and constructivist theory and on genuine teacher technological-pedagogical-content competence, and their successful adoption depends on institutional support, including collaborative professional development and engaged school leadership. A case study of Kurikulum Merdeka implementation at a madrasah aliyah further indicates that IPS content can already be aligned with religious values at the curriculum level, suggesting that madrasah are well positioned to extend this alignment into instructional media as well.

The central implication for madrasah practice is that digital learning media innovation need not be treated as a secular import that sits uneasily alongside a religious-values mission. On the evidence reviewed here, the two goals, instructional engagement and values integration, appear complementary rather than competing, provided media adoption is accompanied by adequate teacher preparation and institutional support rather than pursued as a stand-alone technology initiative. Madrasah leaders and IPS teachers considering media innovation may therefore find it useful to prioritize collaborative professional development structures such as lesson study, to select or design media with explicit attention to how content can be framed in relation to Islamic values, and to treat principal-level engagement as a necessary complement to classroom-level innovation.

This review is, however, subject to clear limitations that also define directions for future research. As a literature review rather than an empirical study, its conclusions about the madrasah IPS context are extended by analogy from a literature that, with one partial exception, was not conducted in madrasah settings. Future research should therefore prioritize classroom-based studies conducted directly within madrasah IPS instruction, examining not only learning outcomes but also how teachers and students experience the relationship between digital media innovation and religious-values integration in practice. Such research would allow the reasoned

synthesis offered in this review to be tested directly against classroom evidence, strengthening the foundation for madrasah-specific instructional policy and teacher preparation going forward.

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