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From Digital Literacy to Islamic Digital Citizenship: A Character-Based Framework for Islamic Education in the AI Era

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Abstract:
The rapid expansion of artificial intelligence (AI) and digital platforms has transformed how students communicate, learn, create, and participate in public life. This transformation requires Islamic Education to move beyond conventional digital literacy toward a broader conception of digital citizenship grounded in Islamic character. This conceptual article develops a character-based framework for Islamic digital citizenship by integrating digital literacy, digital citizenship, Islamic character education, and responsible AI use. The framework is developed through a narrative-conceptual synthesis of relevant literature on digital literacy, digital citizenship, AI in education, ethics, and Islamic education. The proposed framework consists of five interconnected dimensions: digital knowledge and critical literacy; ethical and responsible digital behaviour; Islamic values and character; participatory and collaborative citizenship; and AI awareness and human-centred responsibility. These dimensions are organised around core Islamic virtues, including honesty (ṣidq), trustworthiness (amānah), responsibility (mas'ūliyyah), justice ('adl), respect (ta'ẓīm), moderation (wasaṭiyyah), and beneficial action (maṣlaḥah). The framework positions students and teachers as responsible digital actors rather than passive technology users. It provides a conceptual basis for curriculum development, teacher education, learning activities, assessment, and institutional policy in Islamic Education. Future empirical research should validate the framework across educational levels and cultural contexts.

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Introduction (مقدمة)

Digital transformation has changed the educational environment from a relatively bounded classroom space into a networked ecosystem in which students continuously encounter information, social interaction, algorithmic recommendations, and artificial intelligence. Digital technologies provide substantial opportunities for access to knowledge, collaboration, creativity, and personalised learning. At the same time, they expose learners to misinformation, manipulation, privacy risks, cyberbullying, plagiarism, addictive patterns of use, and other forms of irresponsible digital behaviour. The educational challenge is therefore not simply to ensure that learners can operate digital technologies, but to cultivate the knowledge, values, judgement, and responsibility needed to use them well.

Digital literacy has traditionally focused on the ability to access, understand, evaluate, create, and communicate information through digital technologies. Contemporary approaches increasingly recognise that literacy must include critical evaluation, participation, safety, ethics, and the ability to navigate complex information environments. Digital citizenship extends this perspective by emphasising how individuals behave and participate as members of digital communities. The distinction is important: a digitally skilled learner may know how to use a platform, while a digitally responsible citizen understands the consequences of using that platform for oneself and others.

The emergence of generative AI makes this distinction even more significant. AI systems can generate text, images, audio, code, summaries, recommendations, and other forms of content. These capabilities create new opportunities for teaching and learning but also introduce questions about authorship, accuracy, bias, privacy, intellectual property, academic integrity, and human agency. UNESCO has consequently emphasised human-centred AI competence, ethics, AI pedagogy, and professional learning for educators. The development of digital citizenship in the AI era must therefore include an understanding of how algorithmic and generative systems influence knowledge and action.

For Islamic Education, the challenge has an additional dimension. Islamic Education is not limited to cognitive achievement; it seeks to develop faith, moral conduct, responsibility, and good character. The digital environment is consequently an arena for akhlāq rather than a value-neutral technological space. Principles such as ṣidq (truthfulness), amānah (trustworthiness), ʻadl (justice), wasatiyyah (moderation), and maṣlaḥah (public benefit) can provide ethical orientations for how learners communicate, consume information, create content, use AI, and participate in digital communities.

Existing literature has discussed digital literacy, digital citizenship, media and information literacy, AI literacy, and character education as important areas of educational development. However, these strands are often examined separately. There remains a need for an integrated framework that translates Islamic character values into concrete dimensions of digital citizenship and connects them with the realities of AI-mediated education. Without such integration, Islamic Education risks treating technology either as a purely instrumental tool or as a threat, rather than as an environment in which ethical agency must be cultivated.

This article therefore develops a conceptual framework entitled Islamic Digital Citizenship (IDC), designed to connect digital literacy with Islamic character formation in the AI era. The framework aims to answer three questions: (1) what competencies constitute Islamic digital citizenship; (2) how Islamic character values can guide digital behaviour and AI use; and (3) how the framework can be implemented through Islamic Education. The article contributes a structured conceptual model that can be used as a basis for curriculum design, teacher preparation, learning assessment, and future empirical validation.

Method (منهج)

This study employs a conceptual literature review approach. Rather than collecting primary survey or experimental data, the study synthesises theoretical and research literature related to digital literacy, digital citizenship, AI literacy, character education, AI ethics, and Islamic Education. The purpose is to identify converging concepts and transform them into an integrated educational framework.

Identify Subsections

The literature was selected purposively based on conceptual relevance, scholarly credibility, and contribution to the construction of the framework. Priority was given to peer-reviewed research, international policy documents, and foundational works published primarily within the last decade, while seminal theoretical works were retained where they provide essential conceptual foundations. The synthesis followed four stages: identification of core concepts, comparison of conceptual dimensions, integration with Islamic character values, and formulation of an educational framework.

Research Design

Framework development was guided by a human-centred view of digital and AI education. Digital competence was treated as a combination of knowledge, practical ability, critical judgement, ethics, participation, and responsibility. Islamic character values were then mapped onto these competencies to produce dimensions that are observable in learning activities and digital practices. The resulting framework is conceptual and requires empirical validation before being used as a psychometric instrument or causal model

Result (نتائج)

1. **Conceptual Foundations**

   The literature synthesis indicates that digital literacy and digital citizenship should be treated as complementary rather than identical constructs. Digital literacy explains what individuals need to know and do with digital information and technologies, whereas digital citizenship adds the social, ethical, and participatory dimension of digital life. AI literacy adds another layer because learners need to understand the capabilities, limitations, risks, and societal implications of AI systems. Islamic character education provides the normative orientation that determines how these competencies should be exercised.

2. **Islamic Digital Citizenship Framework**

   The proposed framework consists of five dimensions. The first is digital knowledge and critical literacy, involving the ability to locate, understand, verify, compare, and evaluate digital information. The second is ethical and responsible digital behaviour, including privacy protection, academic integrity, respectful communication, and accountability. The third is Islamic values and character, which provides the moral foundation for digital conduct. The fourth is participatory and collaborative citizenship, emphasising constructive contribution, dialogue, solidarity, and social responsibility. The fifth is AI awareness and human-centred responsibility, requiring learners to understand AI capabilities and limitations while maintaining human judgement and accountability.

Dimension	Core Competency	Islamic Character Orientation	Illustrative Practice
Digital knowledge & critical literacy	Access, analyse, verify and evaluate information	Ṣidq; tabayyun; intellectual responsibility	Checking AI-generated claims

			against credible sources
Ethical & responsible behaviour	Privacy, integrity, respectful communication	Amānah; ‘adl; adab	Citing sources and protecting personal data
Islamic values & character	Internalising moral principles in digital action	Akhlāq; taqwā; wasaṭiyyah	Avoiding harmful, deceptive or excessive digital behaviour
Participatory citizenship	Dialogue, collaboration and constructive contribution	Ukhuwwah; ta‘āwun; maṣlaḥah	Creating beneficial content and participating respectfully
AI awareness & human responsibility	Understand, evaluate and govern AI use	Mas’ūliyyah; amānah; maṣlaḥah	Human review of AI outputs before educational use

3. **Character as the Integrating Core**

A central proposition of the framework is that Islamic character should function as the integrating core rather than an additional component placed beside digital skills. This means that digital competence is evaluated not only by efficiency but also by the quality of intention, conduct, and consequences. For example, the ability to generate text with AI becomes educationally meaningful when accompanied by honesty about AI assistance, verification of information, respect for intellectual property, and responsibility for the final product.

4. **Educational Implementation Model**

The framework can be implemented through four educational layers: curriculum, pedagogy, assessment, and institutional culture. At the curriculum level, Islamic digital citizenship outcomes should be embedded across relevant courses rather than confined to a single technology lesson. At the pedagogical level, teachers can use case analysis, digital projects, source verification exercises, reflective journals, collaborative problem solving, and responsible AI tasks. Assessment should examine both digital performance and ethical decision-making. At the institutional level, schools and universities need clear policies concerning AI use, academic integrity, privacy, and responsible digital communication.

Discussion (مناقشة)

The proposed framework extends conventional digital literacy by treating digital participation as an ethical and civic practice. This is consistent with the development of digital citizenship scholarship, which moves from operational technology skills toward responsible participation in digital society. In Islamic Education, this shift is particularly relevant because educational objectives include the formation of akhlāq and responsible conduct. The digital environment should therefore be understood as another context in which moral education is enacted.

The first implication concerns the concept of *tabayyun*, understood as the careful verification and examination of information before accepting or communicating it. In an AI-mediated information environment, learners can access large amounts of apparently credible information within seconds, while the accuracy and authority of such information cannot always be guaranteed. Generative AI can produce fluent explanations, references, quotations, and interpretations that appear convincing but may contain factual inaccuracies, fabricated

sources, or misleading conclusions. This situation makes conventional information literacy insufficient because learners need not only to locate and consume information but also to evaluate its credibility, origin, context, and evidential basis. Within Islamic education, *tabayyun* provides an important ethical foundation for developing this critical orientation, transforming verification from a merely technical activity into a disciplined intellectual and moral practice (Qur'an 49:6; Miao & Cukurova, 2024).

The principle of *tabayyun* requires learners to develop systematic habits of checking information before accepting it as knowledge or sharing it with others. In the context of AI-generated content, this may involve examining the original source, comparing information across several authoritative references, identifying differences between interpretations, and recognizing situations in which evidence remains uncertain or contested. Such practices correspond to the contemporary principles of source checking and information triangulation, while adding an explicitly ethical dimension to the process. Learners should be encouraged to ask fundamental questions: Who produced this information? What is its source? Can the cited evidence be verified? Does the interpretation accurately represent the original context? Are alternative scholarly perspectives available? Through these questions, *tabayyun* becomes a practical framework for developing learners who do not equate technological fluency with truth and who understand that the accessibility of information does not automatically establish its validity (UNESCO, 2021; Miao & Cukurova, 2024).

The application of *tabayyun* is particularly important in Islamic Religious Education because religious information carries consequences beyond academic knowledge. Incorrect interpretations of Qur'anic verses, Hadith, Islamic law, theology, or religious history may influence students' beliefs, attitudes, and practices. Therefore, students need to distinguish between AI as a technological instrument for exploring information and recognized religious sources as the basis for establishing religious knowledge. AI-generated religious explanations should consequently be treated as provisional material that requires further investigation rather than as an authoritative religious reference. Teachers can develop this competence through learning activities that require students to compare AI-generated responses with primary Islamic sources and scholarly interpretations, identify inaccuracies, and explain why a particular interpretation is accepted, modified, or rejected. Such activities transform *tabayyun* from an abstract religious principle into an observable learning practice that strengthens critical religious literacy.

Ultimately, integrating *tabayyun* into digital literacy provides an Islamic framework for navigating an information environment characterized by speed, abundance, and uncertainty. The goal is not to make learners distrust technology or reject AI, but to cultivate a balanced attitude in which technological tools are used constructively while their outputs remain subject to critical human judgment. Through *tabayyun*, learners can develop awareness of uncertainty, intellectual humility, source accountability, and ethical responsibility before accepting or disseminating AI-generated information. This orientation is consistent with broader approaches to responsible AI literacy that emphasize human agency, critical evaluation, and ethical engagement with technology (Miao & Cukurova, 2024; UNESCO, 2021). Thus, *tabayyun* can serve as a distinctive Islamic foundation for critical digital literacy, enabling learners to move from simply being capable users of AI toward becoming responsible, reflective, and ethically grounded participants in the digital knowledge environment.

The second implication concerns the concept of *amānah* and its relationship to academic integrity in an AI-mediated learning environment. Generative AI has created new opportunities for learners to obtain assistance in writing, problem-solving, summarizing information, and producing academic assignments. At the same time, these capabilities can make it easier for students to submit work that does not adequately represent their own

learning, reasoning, or intellectual effort. The central ethical problem is therefore not simply whether students use AI, but whether their use of AI remains consistent with honesty, responsibility, and the purposes of education. From an Islamic perspective, *amānah* provides an important ethical foundation because knowledge, learning opportunities, and academic responsibilities are forms of trust that require responsible fulfillment. Academic integrity consequently involves more than compliance with institutional rules; it reflects a moral commitment to being truthful about one's learning and intellectual contribution (UNESCO, 2021; Selwyn, 2019).

An Islamic approach to AI use does not necessarily require learners to reject generative AI altogether. Instead, *amānah* encourages responsible and transparent engagement with technological tools. Learners should understand the boundaries established by their teachers or institutions regarding when and how AI assistance is permitted. Where meaningful AI assistance contributes to an assignment, students should acknowledge such assistance in accordance with applicable academic policies. They should also distinguish between using AI as a learning support—for example, generating initial ideas, identifying alternative explanations, or improving language—and allowing AI to replace the intellectual work that the assessment is intended to measure. This distinction is essential because responsible AI use preserves the learner's role as the primary agent of the learning process rather than transferring intellectual responsibility to an automated system (Miao & Cukurova, 2024; Cotton et al., 2024).

The principle of *amānah* also requires learners to remain accountable for the accuracy and quality of the work they submit, even when AI has been involved in its production. Students cannot reasonably attribute inaccurate information, fabricated references, inappropriate interpretations, or other errors to the AI system and thereby avoid responsibility for the final product. Instead, they should verify AI-generated content, examine the credibility of sources, and revise outputs according to academic and disciplinary standards. This requirement is particularly important in Islamic Religious Education, where students may use AI to discuss Qur'anic verses, Hadith, Islamic jurisprudence, theology, or the views of Muslim scholars. Verification and critical evaluation therefore become essential components of responsible learning. In this context, *amānah* complements the principle of *tabayyun*: while *tabayyun* emphasizes careful verification of information, *amānah* emphasizes the learner's responsibility for how that information is used and represented.

Ultimately, integrating *amānah* into AI literacy reframes academic integrity from a narrow concern with detecting or preventing misconduct into a broader project of cultivating ethical digital citizenship. Learners should be encouraged to see AI not as a shortcut for avoiding intellectual effort but as a tool that can support inquiry, creativity, reflection, and deeper learning when used appropriately. Such an approach preserves human agency because students remain responsible for defining their learning goals, evaluating information, making judgments, and standing behind the work they submit. Rather than constructing education around surveillance and prohibition, PAI can cultivate an ethical culture in which transparency, accountability, honesty, and responsible technology use become integral to students' academic identity. In this way, *amānah* provides an Islamic ethical framework for ensuring that the increasing use of generative AI strengthens rather than undermines academic integrity, learner autonomy, and the fundamental purpose of education (Holmes et al., 2019; Miao & Cukurova, 2024; Cotton et al., 2024).

The third implication concerns the principle of *wasaṭiyyah* and its relevance to digital well-being in the context of Islamic digital citizenship. *Wasaṭiyyah*, commonly understood as moderation, balance, and avoidance of excess, provides an important ethical framework for understanding how learners should engage with digital technologies and artificial intelligence. The increasing availability of digital content can encourage prolonged screen

exposure, fragmented attention, continuous media consumption, and habitual dependence on algorithmically generated information. Although digital technologies can expand access to knowledge and facilitate communication, excessive or unreflective use may negatively affect concentration, interpersonal relationships, and the capacity for deep reflection. Therefore, digital competence should not be measured solely by how effectively learners use technology but also by their ability to regulate its use in accordance with educational, social, and personal well-being (UNESCO, 2021; Selwyn, 2019).

From the perspective of *wasaṭiyyah*, moderation does not mean rejecting digital technology or limiting its use indiscriminately. Rather, it involves developing the capacity to determine when, why, and to what extent technology should be used. In an educational setting, learners should be encouraged to distinguish productive digital engagement from passive or excessive consumption. For example, using AI to support research, explore alternative explanations, or organize ideas may contribute positively to learning, whereas continuously relying on automated responses without reflection may weaken intellectual independence. Similarly, prolonged engagement with social media or digital entertainment may reduce opportunities for reading, contemplation, physical activity, and face-to-face interaction. *Wasaṭiyyah* therefore encourages learners to establish healthy boundaries between online and offline activities and to use technology as a means of achieving meaningful educational and social purposes rather than allowing digital activity to dominate everyday life.

The principle of *wasaṭiyyah* also has implications for the quality of learners' participation in digital spaces. Digital citizenship is often discussed in terms of appropriate public behavior, such as respectful communication, responsible sharing, and protection of privacy. However, a character-based Islamic framework extends this responsibility to self-regulation and personal discipline. Learners need to develop the ability to pause before responding, reflect before sharing information, and disengage when digital interaction becomes emotionally, intellectually, or socially harmful. Such practices require an awareness of personal limits and the consequences of excessive digital engagement. In this respect, digital well-being becomes closely connected to character formation because responsible digital citizens are not merely individuals who follow external rules but persons capable of regulating their own behavior according to ethical principles and long-term well-being (Ribble, 2015; UNESCO, 2021).

Ultimately, integrating *wasaṭiyyah* into Islamic digital citizenship transforms digital well-being from a technological or psychological concern into an ethical dimension of character education. The objective is to cultivate learners who can benefit from AI and digital technologies without becoming excessively dependent upon them, distracted by them, or isolated from meaningful human relationships. Such learners are capable of balancing technological engagement with reflection, study with rest, online interaction with face-to-face relationships, and digital productivity with personal and spiritual development. In this sense, *wasaṭiyyah* complements *tabayyun* and *amānah*: *tabayyun* guides learners to verify information, *amānah* guides them to use information and technology responsibly, while *wasaṭiyyah* guides them to regulate the extent and manner of their digital engagement. Together, these principles provide a character-based foundation for developing Islamic digital citizens who exercise technological competence alongside critical judgment, ethical responsibility, self-discipline, and balanced living (Holmes et al., 2019; Selwyn, 2019; Miao & Cukurova, 2024).

The fourth implication concerns the principle of *maṣlaḥah*, which provides an important ethical basis for evaluating the social consequences of digital actions. In Islamic thought, *maṣlaḥah* refers broadly to the pursuit and preservation of legitimate benefit while preventing or reducing harm. Applied to digital citizenship, this principle encourages learners to move beyond the question of whether a particular technological action is

technically possible toward a more fundamental ethical question: whether the action produces benefit or harm for oneself and others. This perspective is particularly relevant in an AI-mediated environment, where digital content can be created, modified, and distributed rapidly to large audiences. The capacity to generate information therefore needs to be accompanied by an awareness of its potential social consequences. Digital competence becomes meaningful when technological capabilities are directed toward purposes that contribute to individual, educational, and societal well-being (UNESCO, 2021; Miao & Cukurova, 2024).

The principle of *maṣlaḥah* encourages learners to use digital technologies as instruments for constructive participation and social contribution. Creating educational content, assisting peers in accessing reliable information, correcting misinformation, participating in community initiatives, and using AI to address legitimate educational problems represent forms of technology use oriented toward benefit. In the context of Islamic Religious Education, learners can, for example, employ digital platforms to disseminate educational materials, develop creative explanations of Islamic concepts, support collaborative learning, or promote positive social campaigns. Such activities demonstrate that digital citizenship is not limited to avoiding inappropriate behavior but also includes an active commitment to creating value for others. The learner is therefore positioned not merely as a consumer of digital content but as a responsible producer and participant who considers how technological resources can contribute to educational and social improvement (Ribble, 2015; UNESCO, 2021).

Conversely, the *maṣlaḥah* framework provides a clear basis for identifying forms of digital behavior that undermine the social purpose of technology. Harassment, deception, manipulation, privacy violations, malicious content creation, and the dissemination of unverified information can produce direct or indirect harm to individuals and communities. Generative AI may intensify these risks because it enables users to produce persuasive text and other forms of content at considerable speed and scale. Consequently, learners need to develop the capacity to anticipate the possible consequences of their digital actions before creating or sharing content. This requires consideration of questions such as whether the information is accurate, whether another person's dignity or privacy may be affected, whether the content could mislead others, and whether its circulation contributes to or undermines the common good. Such reflective judgment transforms *maṣlaḥah* from an abstract ethical concept into a practical decision-making principle for digital participation (Selwyn, 2019; Miao & Cukurova, 2024).

Ultimately, integrating *maṣlaḥah* into Islamic digital citizenship shifts the emphasis from individual technological competence toward socially responsible technological participation. Learners are encouraged to understand that every digital action can have consequences beyond the immediate user, particularly in networked environments where information can spread rapidly and remain accessible for extended periods. In combination with *tabayyun*, *amānah*, and *wasaṭiyyah*, *maṣlaḥah* contributes another essential dimension to a character-based framework: *tabayyun* guides learners to verify information, *amānah* establishes accountability and integrity, *wasaṭiyyah* promotes moderation and self-regulation, while *maṣlaḥah* directs digital behavior toward legitimate benefit and the prevention of harm. This integrated orientation positions Islamic digital citizenship as an ethical form of participation in which learners use AI and digital technologies not simply because they can, but because their use contributes to knowledge, human dignity, social responsibility, and the broader common good (Holmes et al., 2019; Selwyn, 2019; UNESCO, 2021).

Teacher competence is central to implementation. Teachers need sufficient digital and AI literacy to model responsible behaviour. Professional development should therefore include not only technical demonstrations but also ethical case discussions, assessment

redesign, AI verification practices, data protection, and reflection on the changing teacher-student relationship. UNESCO's AI competency framework similarly emphasises human-centred attitudes, ethics, AI foundations and applications, AI pedagogy, and professional learning.

The framework also has implications for curriculum design. Islamic Education curricula can formulate learning outcomes that combine knowledge, skills, character, and citizenship. A learning outcome might require students to evaluate an AI-generated explanation of an Islamic concept, verify its claims using authoritative sources, identify inaccuracies, revise the explanation, and reflect on the ethical responsibilities involved. Such activities make digital literacy, AI literacy, critical thinking, and Islamic character mutually reinforcing rather than separate learning objectives.

Nevertheless, the framework has limitations. It is conceptual and does not yet establish empirical relationships among its dimensions. Cultural and institutional differences may also influence how Islamic digital citizenship is interpreted and implemented. Future studies should develop validated indicators, conduct expert validation, test the framework with teachers and students, and examine whether Islamic digital citizenship predicts responsible AI use, digital well-being, academic integrity, and learning outcomes.

Conclusion (خاتمة)

This article proposes Islamic Digital Citizenship as a character-based framework for Islamic Education in the AI era. The framework integrates digital knowledge and critical literacy, ethical and responsible behaviour, Islamic character, participatory citizenship, and AI awareness within a human-centred educational orientation. Its central proposition is that digital competence should be directed by character and responsibility rather than measured only by technical proficiency.

The framework provides a conceptual foundation for curriculum development, teacher professional development, learning design, assessment, and institutional policy. Islamic values such as ṣidq, tabayyun, amānah, ʻadl, adab, wasaṭiyyah, and maṣlaḥah can translate abstract digital ethics into meaningful educational practices. Future empirical research is needed to validate the dimensions, develop measurement instruments, and examine the framework across different Islamic educational contexts

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