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# When Machines Become Educational Mediators: A Philosophical Critique of Artificial Intelligence from the Perspective of Islamic Education

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**Abstract:**
The rapid development of artificial intelligence (AI) has transformed the technological environment of education and the ways learners encounter, process, and produce knowledge. The growing use of generative AI raises a fundamental question: when learning is increasingly mediated by machines, what remains distinctive about the human being as the subject of education? This article examines AI-mediated education from the perspective of Islamic educational philosophy, focusing on technological competence, knowledge, wisdom, and human dignity. The study employs qualitative library research and philosophical-conceptual analysis of literature on AI in education, digital literacy, cognitive offloading, educational ethics, and Islamic educational thought. The findings identify four interconnected issues: AI's transformation from an educational tool into a mediator of knowledge; the tendency to equate technological competence with knowledge; the risk of epistemic and cognitive dependence; and the potential displacement of human formation by technological efficiency. The article's original contribution is a human-centred Islamic philosophical perspective that connects intellectual and moral agency with the concept of *adab*. It distinguishes access to information from meaningful knowledge and wisdom, while positioning learners as rational, moral, spiritual, and responsible subjects. Practically, this approach recommends using AI to support inquiry, learning, and reflection without surrendering human responsibility. Teachers and learners must continue to verify information, exercise critical judgment, and make ethical decisions. AI should therefore remain a mediated instrument under human intellectual and moral control, rather than the primary authority shaping educational meaning.

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## Introduction (مقدمة)

The rapid development of artificial intelligence (AI) has begun to transform education in ways that extend beyond the introduction of new learning technologies. Generative AI systems can now produce explanations, summarize texts, generate questions, provide feedback, translate languages, and assist users in producing academic writing. These developments have created new possibilities for teaching and learning while simultaneously raising fundamental questions about the changing relationship between human beings, knowledge, and technology. UNESCO's guidance on generative AI in education emphasizes the importance of a human-centred approach, recognizing that the growing capacity of AI to process information and generate content has significant implications for human agency, educational practices, and the purposes of learning (Miao & Holmes, 2023).

The expansion of AI should therefore not be understood merely as another stage in the digitalization of education. Digital technologies have already changed how learners search for, select, evaluate, and communicate information. Digital literacy consequently cannot be reduced to the ability to operate devices or applications. The European Union's DigComp framework, for instance, places information and data literacy, communication, content creation, safety, and problem solving within a broader understanding of digital competence (Vuorikari et al., 2022). UNESCO similarly emphasizes media and information literacy as the capacity to access, evaluate, critically interpret, and use information rather than simply consume it. This distinction becomes increasingly important when AI enters the learning process, because the ability to operate technological systems does not necessarily correspond to the ability to understand, evaluate, or critically interpret the information they produce.

A student may know how to formulate prompts, generate an essay, summarize an article, or obtain an answer from an AI system. Yet such technological competence does not necessarily mean that the student possesses the knowledge represented in the generated answer. Nor does access to extensive information automatically produce wisdom. This distinction is philosophically significant because education has historically been concerned not only with the acquisition of information but also with the formation of judgment, character, responsibility, and the capacity to distinguish truth from error. The central question, therefore, is not simply whether AI can provide information efficiently, but whether learners remain intellectually engaged in the process of understanding and producing knowledge.

Recent studies on AI in education demonstrate that the dominant literature has largely focused on applications, learning outcomes, personalization, efficiency, academic integrity, ethics, and technological adoption. A systematic review by Zawacki-Richter et al. (2019) showed that AI in higher education had been examined across areas such as assessment, profiling, prediction, intelligent tutoring, and adaptive systems, while also identifying the relatively limited involvement of educators in the research agenda. More recent reviews have expanded the field to include generative AI, ChatGPT, ethical risks, institutional adoption, and pedagogical possibilities (Albadarin et al., 2024; Mustafa et al., 2024; Wang et al., 2024; Yusuf et al., 2024). Although these studies provide important insights into the opportunities and limitations of AI, their dominant concerns remain closely associated with technological applications, pedagogical effectiveness, and the governance of AI use.

The educational consequences of generative AI, however, cannot be reduced to questions of academic cheating or technological ethics. Kasneci et al. (2023) identify both opportunities and limitations associated with large language models, emphasizing the importance of critical thinking, fact checking, and human oversight. Tlili et al. (2023) similarly demonstrate that ChatGPT creates possibilities for educational transformation while simultaneously raising concerns regarding honesty, truthfulness, privacy, and manipulation. Fütterer et al. (2023),

through an analysis of more than 16 million tweets, also found that public discussions about ChatGPT in education involved both enthusiasm and concern, including questions about cheating, misinformation, and the role of AI as a learning partner. These discussions indicate that the challenge of AI in education extends beyond the responsible use of technology to the more fundamental question of how technological mediation affects the learner's intellectual agency.

An important conceptual gap consequently remains. Much of the existing discussion asks what AI can do for education, how AI can improve learning, or how it should be used ethically. Comparatively less attention has been given to the philosophical implications of allowing machines to increasingly mediate the processes through which learners encounter, interpret, and produce knowledge, particularly from the perspective of Islamic educational philosophy. The issue is not simply whether AI provides correct or incorrect answers. The deeper concern is the position of the human being in the educational process. If searching, summarizing, explaining, composing, evaluating, and even generating ideas are increasingly delegated to machines, education may gradually shift from the formation of a knowing subject toward the efficient production of informational outputs. This shift raises a fundamental concern about whether technological efficiency can adequately represent the broader intellectual, moral, and spiritual purposes of education.

This concern is closely connected to the phenomenon of cognitive offloading. Earlier research on digital technologies demonstrated that external access to information can change how people remember and process knowledge. Sparrow et al. (2011), for example, found that when people expected information to remain accessible externally, they showed reduced recall of the information itself but increased recall of where it could be found. The extended-mind perspective developed by Clark and Chalmers (1998) further demonstrates how external technological resources can become integrated into human cognitive processes. With generative AI, however, the issue becomes more complex because the machine does not merely store or retrieve information; it can also produce apparently meaningful responses. The learner therefore faces a new possibility: not simply remembering less, but thinking less because the machine appears to think on the learner's behalf. When intellectual activities are increasingly delegated to AI without sufficient critical engagement, the development of independent judgment and knowledge ownership may be weakened.

This development raises the possibility of educational dehumanization. Dehumanization in this article does not mean that technology literally eliminates human beings. Rather, it refers to a gradual reduction of education's human purposes when efficiency, automation, and information production become more important than intellectual judgment, moral formation, relationality, responsibility, and the development of the whole person. Contemporary discussions of AI ethics in education already emphasize autonomy, agency, fairness, accountability, transparency, and human oversight (Holmes et al., 2022; Nguyen et al., 2023). UNESCO's AI competency frameworks similarly place a human-centred mindset and human agency at the core of AI competencies for both teachers and students. Nevertheless, a human-centred approach requires more than protecting human control over technological systems. It also requires a philosophical understanding of what kind of human being education seeks to form and what constitutes meaningful knowledge.

This is where Islamic educational philosophy provides a distinctive perspective. Unlike approaches that primarily evaluate educational technology through efficiency, functionality, or measurable learning outcomes, Islamic educational thought places the nature of knowledge and the formation of the human being within an integrated moral and spiritual worldview. Islamic education does not understand education simply as the transfer of information. Halstead (2004) explains that Islamic conceptions of education involve individual development, social and moral formation, and the acquisition of knowledge. Al-Attas (1980) places *ta'dib* and the formation of the human being at the centre of educational thinking, emphasizing the relationship between

knowledge, wisdom, justice, and the proper ordering of human life. This philosophical orientation is further elaborated by Wan Daud (1998), who explains that Al-Attas's educational philosophy connects the acquisition of knowledge with the recognition and acknowledgment of the proper order of reality and the development of a good human being. Sahin (2018) likewise argues for a more conceptually rigorous and interdisciplinary understanding of Islamic education rather than reducing it to institutional or curricular categories.

Within this philosophical framework, *adab* becomes particularly relevant to addressing the challenges of AI-mediated education. In Al-Attas's conception, *adab* is not merely etiquette, politeness, or the practice of good behaviour. It involves the recognition and acknowledgment of the proper place of things within the order of knowledge and existence, as well as the capacity to act in accordance with that recognition (Al-Attas, 1980; Wan Daud, 1998). Thus, *adab* provides a philosophical foundation for understanding the relationship between knowledge, wisdom, justice, and human responsibility. It emphasizes that possessing information is not equivalent to understanding its meaning, and understanding information does not automatically lead to wise and responsible action. Knowledge must be situated within an appropriate moral and intellectual order.

This understanding offers an important way to examine the position of AI in education. AI can facilitate access to information, generate explanations, and support intellectual activities, but it cannot independently determine the moral significance, ultimate purpose, or proper use of knowledge. Such judgments remain inseparable from human intellectual reflection, ethical responsibility, and spiritual orientation. From this perspective, *adab* functions as a normative principle for maintaining the proper relationship between technological capability and human agency. It also provides a basis for preventing the confusion between informational production and genuine knowledge formation. Recent scholarship has begun to reconnect Al-Attas's concept of *adab* with contemporary educational challenges. Yunita et al. (2025), for example, discuss the importance of reconnecting knowledge and *adab* in Islamic education amid digital transformation, while In'ami et al. (2025) contextualize *adab* as central to the educational aim of forming a good human being. However, the implications of *adab* for understanding AI as an increasingly influential mediator of knowledge, particularly in relation to cognitive dependence, epistemic authority, and human dignity, warrant further philosophical examination.

Based on this discussion, the research gap addressed in this article concerns the limited philosophical integration of AI-mediated knowledge, human intellectual and moral agency, and the Islamic conception of the human being as the subject and purpose of education. Previous studies have predominantly examined AI through its technological applications, pedagogical benefits, ethical risks, and institutional implications. Meanwhile, Islamic educational scholarship has emphasized the importance of *adab*, moral formation, and the development of the good human being. This article brings these discussions into a single philosophical inquiry by examining how the mediation of knowledge through AI challenges the relationship between technological competence, knowledge, and wisdom, and how the Islamic concept of *adab* can provide a normative foundation for maintaining human agency and dignity in education.

The originality of this study lies in its formulation of a human-centred Islamic educational perspective that positions *adab* as a philosophical bridge between the epistemological challenges of AI-mediated learning and the moral and spiritual purposes of education. Rather than treating AI merely as a tool whose use must be regulated, this perspective examines its position as a mediator of knowledge whose role must remain subordinate to human intellectual judgment, moral responsibility, and educational purposes. In doing so, the article extends the discussion of human-centred AI beyond technological oversight toward the formation of the human being as a knowledgeable, wise, ethical, and spiritually responsible subject.

Accordingly, this study addresses two questions: (1) How does AI-mediated education challenge the distinction between technological competence, knowledge, and wisdom? and (2)

How can the Islamic concept of *adab* provide a philosophical foundation for maintaining human agency and dignity in AI-mediated education? The objective is to critically analyze the philosophical implications of AI-mediated education and to formulate an Islamic educational perspective that repositions AI as an instrument of learning rather than a substitute for human intellectual, moral, and spiritual formation.

## Method (منهج)

### Research Design

This study employed qualitative library research with a philosophical-conceptual approach to examine the implications of artificial intelligence (AI) as a mediator of educational processes from the perspective of Islamic educational philosophy. Library research involves the systematic identification, selection, analysis, and synthesis of relevant literature (Snyder, 2019). Rather than measuring the effectiveness of AI applications, this study focused on the conceptual relationships between technology, knowledge, human agency, and the purposes of education.

### Data Sources and Literature Selection

The literature was obtained through Google Scholar and Scopus, focusing on four areas: (1) AI in education, particularly generative AI and AI ethics; (2) digital and information literacy; (3) cognitive offloading and human cognition; and (4) Islamic educational philosophy, particularly knowledge, wisdom, *adab*, and human formation. Search terms included "artificial intelligence in education," "generative AI," "AI-mediated learning," "digital literacy," "cognitive offloading," "human agency," "Islamic educational philosophy," and "adab," combined using Boolean operators where appropriate.

The selection criteria included relevance to the research questions, scholarly credibility, and contribution to the conceptual analysis. Recent publications from 2020 to 2025 were prioritized to identify contemporary developments and research gaps concerning AI and education. However, foundational methodological and philosophical works were included regardless of publication year. Selection involved screening titles and abstracts, followed by full-text examination. Publications lacking scholarly relevance or providing only technical descriptions without educational or philosophical implications were excluded.

### Data Collection and Analysis

The literature was critically examined through thematic and philosophical-conceptual analysis. Thematic analysis identified recurring patterns and concepts across the selected literature (Braun & Clarke, 2006), while philosophical-conceptual analysis examined the meanings and relationships among AI, knowledge, wisdom, human agency, and education (Kölbel, 2023).

The analysis proceeded through four themes: (1) AI as a mediator of knowledge; (2) technological competence, knowledge, and wisdom; (3) cognitive dependence and epistemic agency; and (4) human formation and potential dehumanization. These themes were critically interpreted through Islamic educational concepts, particularly knowledge, wisdom, *adab*, and human responsibility. Specifically, *adab* served as a philosophical basis for examining the relationship between knowledge, the knower, and ethical responsibility, while knowledge and wisdom helped distinguish information production from meaningful understanding and responsible judgment. The analysis was subsequently synthesized into a conceptual framework of Human-Centred AI-Mediated Islamic Education, positioning AI as a supporting instrument while maintaining human intellectual, moral, and spiritual agency.

## Result (نتائج)

The analysis identified four interconnected findings concerning AI-mediated education.

## Artificial Intelligence Has Shifted from an Educational Tool to a Mediator of Knowledge

The first finding concerns a change in the position of AI in education. Earlier educational technologies generally functioned as tools used by teachers and students. Search engines provided access to information, learning management systems organized materials, and digital platforms facilitated communication. Generative AI introduces a different relationship because the system can produce explanations, interpretations, examples, summaries, and written outputs in response to user prompts.

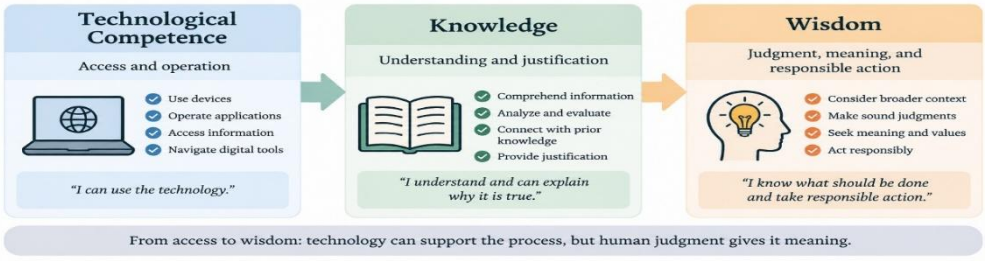
The distinction is important. A calculator primarily assists a learner in performing a calculation, while a generative AI system can provide an apparent solution and an accompanying explanation. A search engine points toward possible sources, whereas a generative AI system can synthesize an answer before the learner examines the sources themselves. The machine consequently moves from being merely an instrument of access toward becoming a mediator of meaning.

This transformation is reflected in current educational literature. UNESCO's 2024 framework for teachers explicitly describes an emerging teacher–AI–student dynamic, while the student framework emphasizes the need for students to critically judge AI outputs rather than simply accept them. Reviews of AI in education similarly show the rapid expansion of AI from adaptive learning and assessment toward generative systems capable of directly participating in learning activities (Holmes & Tuomi, 2022; Wang et al., 2024). Thus, the issue is no longer simply whether teachers and students use AI, but how far AI participates in determining what is encountered as knowledge.

## Technological Competence Does Not Automatically Produce Knowledge or Wisdom

The second finding is a conceptual distinction among technological competence, knowledge, and wisdom. Technological competence refers to the ability to operate and employ technological systems effectively. A learner who can formulate prompts, evaluate AI outputs, manipulate digital tools, and select appropriate applications may possess high technological competence. Yet competence in using technology does not automatically demonstrate that the learner understands the subject matter.

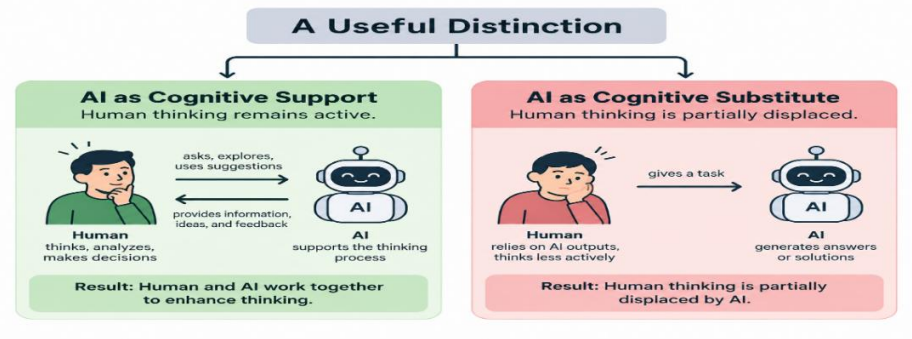
Knowledge involves more than obtaining an answer. It requires comprehension, contextualization, evaluation, justification, and the ability to connect information with an established body of understanding. Wisdom requires an additional dimension: the capacity to judge what should be done, why it should be done, and what consequences follow from a particular decision. The distinction can therefore be represented as follows:




AI may significantly support the first two processes, but it cannot simply be assumed to provide the third. This is especially important because generative AI can produce fluent and apparently authoritative responses without guaranteeing truth or contextual appropriateness. Hicks et al. (2024), for example, argue that large language models can generate statements without possessing an orientation toward truth in the human sense. Consequently, the presence of an answer does not eliminate the educational necessity of questioning the answer.

## Excessive Dependence on AI Creates Epistemic and Cognitive Vulnerability

The third finding concerns the relationship between AI use and cognitive dependence. Digital technologies have long enabled people to outsource some cognitive tasks. Sparrow et al. (2011) demonstrated that people can rely on external information systems as a form of transactive memory. The development of generative AI intensifies this possibility because the external system can now produce coherent language and reasoning-like responses. The problem emerges when assistance becomes substitution. A useful distinction is:




The educational danger therefore does not lie in every form of AI assistance. Rather, it appears when students repeatedly delegate tasks that are themselves central to learning: interpreting a problem, constructing an argument, comparing evidence, formulating a question, and making a judgment.

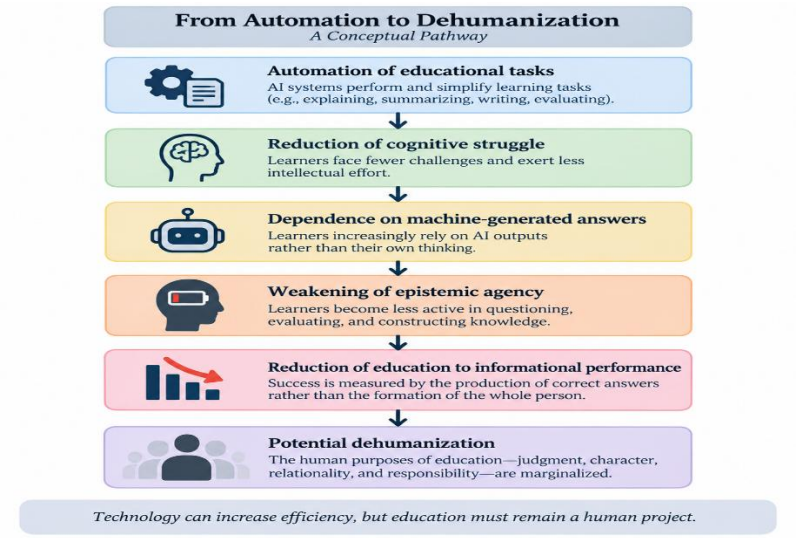
Recent research and conceptual work increasingly identifies cognitive offloading as an important issue in AI-supported learning. The current literature distinguishes productive use of AI as scaffolding from excessive dependence that can reduce the learner's engagement with difficult cognitive work. The result is a potential epistemic vulnerability: learners may become increasingly dependent on systems that they are not sufficiently equipped to question.

## AI-Mediated Education Creates a Risk of Dehumanization

The fourth finding concerns the possibility of dehumanization. The risk of dehumanization in AI-mediated education does not necessarily arise from the replacement of teachers by machines. Rather, it emerges when educational processes become increasingly oriented toward technological efficiency and measurable outputs, while the human dimensions of learning receive less attention. Although AI can facilitate the production of answers, summaries, and assignments, these outputs do not necessarily reflect learners' understanding, moral judgment, or personal responsibility. Education should therefore be evaluated not only through the speed and accuracy of task completion but also through the intellectual, social, and ethical development of learners.

This concern is consistent with UNESCO's (2023) human-centred approach to generative AI, which emphasizes that AI should support rather than undermine human agency in education. Similarly, Ifenthaler et al. (2024) highlight the importance of considering the broader implications of AI for teaching and learning, rather than relying solely on its technical capabilities. These perspectives suggest that the educational value of AI must be assessed in relation to the human purposes it serves.

Learning involves more than obtaining correct answers; it also requires questioning, reflection, intellectual struggle, interaction, and the development of responsibility. When these processes are increasingly delegated to AI, learners may produce satisfactory academic outputs without sufficiently engaging in the experiences that contribute to their intellectual and personal formation. The risk can therefore be conceptualized as:




The risk can therefore be conceptualized as a shift from human formation toward output-oriented education. This does not mean that AI inevitably causes dehumanization. Rather, the risk emerges when technological convenience takes precedence over human agency, meaningful interaction, and the broader purposes of education. Accordingly, AI should remain a supporting instrument, while human development continues to serve as the central purpose of education.

## Discussion (مناقشة)

### From Educational Tool to Educational Mediator

The Problem Is Not the Machine, but the Changing Position of the Human Being. The findings suggest that the central philosophical problem is not whether machines are good or bad for education. Such a binary question is too limited. The more important question is what position humans occupy when machines increasingly participate in educational processes.

Holmes and Tuomi (2022) have shown that AI in education is based on different assumptions about both AI and education. This observation is important because educational technology is never philosophically neutral. A technology embodies particular assumptions about what counts as learning, what counts as knowledge, and what educational problems are considered worth solving.

When AI is primarily understood as a mechanism for increasing speed and efficiency, educational success may gradually be interpreted in terms of productivity. However, when education is understood as human formation, technological efficiency becomes only one element within a larger process.

This is why the question "Can AI teach?" is less fundamental than: "What kind of human being is education trying to form when AI becomes part of the teaching and learning process?" That question shifts the discussion from technology to educational philosophy.

This discussion reveals a tension between the instrumental and human-centred perspectives of educational technology. From an instrumental perspective, AI is valued for improving efficiency, accessibility, and learning productivity. However, these benefits do not automatically guarantee meaningful learning or human development. A human-centred perspective requires educational technology to be evaluated according to its contribution to learners' intellectual and moral formation. Thus, the shift from AI as a tool to AI as an educational mediator requires a reconsideration of educational success: not merely what technology enables learners to produce, but what learners become through the learning process.

### From Information to Knowledge: Why Digital Literacy Must Become Epistemic Literacy

The distinction between technological competence and knowledge has implications for digital literacy. A technologically competent learner can use AI efficiently. An epistemically literate learner asks: Where did this information come from? What evidence supports it? What assumptions are embedded in the answer? What might the system have omitted? Can the claim be independently verified? Is the answer appropriate to the particular context? And What should I conclude from it? This means that digital literacy in the AI era should develop beyond operational competence toward epistemic judgment.

UNESCO's media and information literacy framework already emphasizes critical engagement with information rather than passive consumption. The UNESCO AI competency framework for students similarly emphasizes critical judgment of AI solutions and a human-centred mindset. These frameworks support an important educational principle: the more powerful the technology becomes, the more important human judgment becomes.

The problem of low digital literacy therefore cannot be solved simply by teaching students more applications. Students need to understand how knowledge is constructed, validated, interpreted, and used.

## Cognitive Offloading and the Loss of Educational Struggle

One of the paradoxes of AI-mediated education is that the technology can make learning activities easier while potentially making learning itself shallower. Learning often requires intellectual effort. Students need to encounter uncertainty, formulate questions, make mistakes, compare alternatives, and revise their understanding. If AI removes too much of this productive difficulty, the learner may complete the task without experiencing the intellectual process that the task was designed to cultivate.

The concept of cognitive offloading helps explain this tension. Clark and Chalmers's (1998) extended-mind thesis demonstrates that external resources can participate in human cognitive activity. Sparrow et al. (2011) further showed that external information access can change memory practices. In the context of generative AI, the question becomes whether externalization merely extends cognition or begins to replace the cognitive activity that education is intended to develop.

However, cognitive offloading should not automatically be regarded as a negative educational practice. External cognitive support can extend learners' capabilities when it helps them organize information, receive feedback, or examine alternative arguments. The problem arises when such support replaces rather than strengthens the learner's own intellectual engagement. This distinction is essential in AI-mediated education: using AI to challenge and refine an independently developed argument may support learning, whereas allowing AI to formulate the argument without meaningful learner involvement may weaken intellectual responsibility. Therefore, the educational boundary should be determined not by the frequency of AI use, but by whether learners remain actively involved in the processes of understanding, verification, and judgment.

## Re-reading Human Nature through Islamic Educational Philosophy

At this point, Islamic educational philosophy offers a different starting point. The human being in Islamic education cannot be reduced to an information processor. Education concerns the formation of a person whose intellectual, moral, spiritual, and social dimensions are interconnected.

Halstead (2004) identifies individual development, moral and social formation, and the acquisition of knowledge as interconnected dimensions of Islamic education. Al-Attas's educational philosophy similarly emphasizes the proper ordering of knowledge and the formation of the human being through *ta'dib*.

This perspective provides an important answer to the question raised in the introduction: What is the human being in education when learning is increasingly mediated by machines?

From an Islamic educational perspective, the human being remains the subject, not merely the user, consumer, or evaluator of machine-generated information.

Human beings possess intellectual capacity, moral responsibility, spiritual orientation, and the capacity to make judgments about meaning and value. A machine may generate an explanation, but it does not thereby become the bearer of educational responsibility. This distinction can be summarized as:

| Dimension | AI system | Human learner |
|---|---|---|
| Information processing | High computational capacity | Selective and contextual |
| Content generation | Can generate rapidly | Generates through intention and experience |
| Understanding | Produces linguistic representations | Interprets meaning |
| Moral responsibility | No intrinsic moral responsibility | Bears responsibility for action |
| Wisdom | Cannot simply be inferred from output | Develops through reflection and judgment |
| Adab | Cannot possess adab as a moral subject | Can cultivate adab |
| Educational purpose | Instrumental support | Human formation |

The table does not imply that AI has no educational value. Rather, it clarifies the ontological distinction between the technological system and the human subject.

## *Adab* as a Philosophical Response to AI-Mediated Education

The concept of *adab* becomes particularly important because it connects knowledge with proper judgment and conduct. If education is reduced to the accumulation of information, AI can appear almost sufficient: it can provide enormous quantities of information quickly. But if education involves knowing how knowledge should be positioned and used, information alone is insufficient.

The contemporary discussion of *adab* in Islamic education emphasizes that education should not separate intellectual development from moral and spiritual formation. Recent studies applying Al-Attas's thought to the digital era similarly identify the relationship between knowledge and *adab* as a central issue in responding to digital transformation.

This gives *adab* an important function in AI-mediated education. The question is no longer: "Can the student obtain an answer from AI?" but: "Does the student know when to accept, question, verify, reject, or responsibly use the answer?" This is precisely where knowledge moves toward wisdom.

In Al-Attas's educational philosophy, *adab* is not merely a matter of proper conduct but involves recognizing and acknowledging the proper place of things within the order of knowledge and existence (Wan Daud, 1998). Applied to AI-mediated education, this understanding places responsibility on learners to recognize the position of AI-generated information within the process of acquiring knowledge. Information provided by AI should not automatically be treated as established knowledge; it requires examination, contextual understanding, and responsible judgment. In this sense, *adab* connects knowledge (*'ilm*) with wisdom (*hikmah*). Knowledge enables learners to understand and evaluate information, while wisdom guides them in determining how and when that knowledge should be used. Consequently, intellectual responsibility cannot be delegated to AI because the learner remains accountable for accepting, interpreting, and acting upon the information obtained. This is how *adab* can address both cognitive dependence and the risk of dehumanization: it preserves the learner as an active, morally responsible subject in the pursuit of knowledge.

## Educational Implications for Teachers and Students

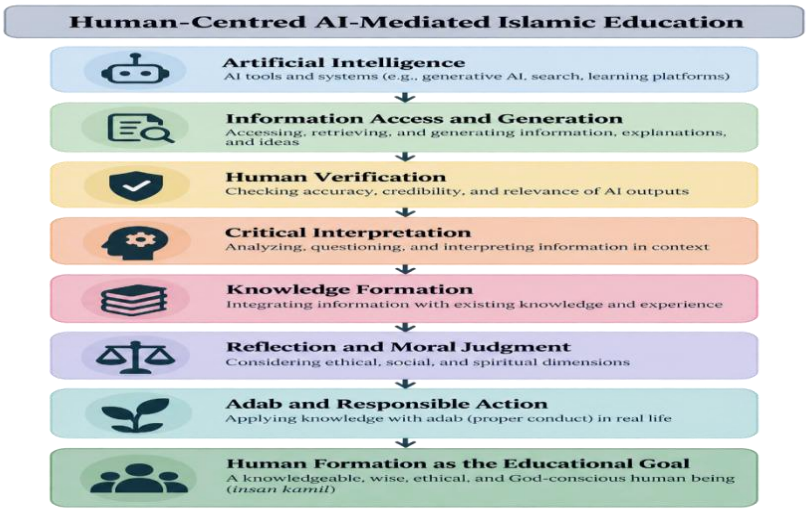
The philosophical arguments discussed above have practical implications for both teachers and students. For teachers, AI should be integrated as a learning support rather than a substitute for pedagogical judgment and human interaction. Teachers need to design activities that require students to question AI-generated responses, compare them with credible sources, identify possible inaccuracies, and explain their own conclusions. Assessment should therefore consider not only the final product but also the reasoning, verification, and reflection demonstrated throughout the learning process.

For students, responsible AI use requires more than operational skills. Students should be encouraged to use AI to explore ideas, obtain feedback, and examine alternative perspectives while maintaining responsibility for verifying information, constructing arguments, and making decisions. From the perspective of *adab*, students should recognize that access to information does not automatically constitute knowledge and that the use of knowledge entails intellectual and moral responsibility. These practices position AI as a supporting instrument while preserving the learner's active role in the educational process. See on the table of Practical Implications of Adab-Based AI Integration for Teachers and Students:

| Educational actors | Recommended practices | Philosophical foundation |
|---|---|---|
| Teachers | Design learning activities that require students to verify AI-generated information, compare sources, and engage in critical reflection. | Adab and pedagogical responsibility |
| Teachers | Assess students' reasoning processes, critical engagement, and reflection rather than focusing solely on final learning outcomes. | Intellectual and moral formation |
| Students | Examine the sources, accuracy, and contextual relevance of AI-generated information. | 'Ilm and epistemic literacy |
| Students | Develop their own arguments and conclusions while using AI as a supporting tool. | Intellectual responsibility |
| Students | Consider the ethical implications before accepting or using AI-generated information. | Hikmah and Adab |

## Toward a Human-Centred Model of AI in Islamic Education

Based on the findings and discussion, this study proposes a conceptual model:




The model places AI at the beginning of the educational process but not at its endpoint. AI may assist with information access, explanation, translation, feedback, and idea generation. However, the learner must remain responsible for verification, interpretation, judgment, and action.

This model is consistent with UNESCO's human-centred approach, which places human agency, ethical use, and meaningful educational purposes at the centre of AI adoption. It also corresponds with the OECD's argument that digital education ecosystems require not only technological infrastructure but also human actors who make technologies meaningful. The philosophical contribution of Islamic education is to add another dimension: the moral and spiritual formation of the person.

### Repositioning AI: Tool, Tutor, or Substitute?

The findings also suggest that the position of AI should be distinguished into three levels:

| Position of AI | Educational Character | Risk |
|---|---|---|
| Tool | Supports a human-defined learning activity | Relatively limited |
| Tutor/Partner | Interacts with learners and provides feedback | Requires critical oversight |
| Substitute | Performs cognitive tasks intended for the learner | High risk of cognitive dependence |

The distinction is important because AI does not have a single educational effect. Its consequences depend partly on how educational actors position it. This is consistent with current research that emphasizes the need for human oversight, critical thinking, fact checking, and responsible use rather than either unrestricted adoption or complete rejection (Kasneci et al., 2023; Nguyen et al., 2023; Cotton et al., 2024).

The Islamic educational perspective adds that the boundary should not be defined only by efficiency or academic integrity. It should also be defined by whether a particular use of AI contributes to or undermines the formation of the human being.

## Conclusion (خاتمة)

This study concludes that the increasing mediation of education by artificial intelligence (AI) raises a fundamental philosophical concern about the position of human beings in the educational process. The findings show that AI has moved beyond its role as a technological tool toward becoming a mediator of information, explanation, and knowledge production. This shift creates a distinction between technological competence, knowledge, and wisdom: the ability to access and operate AI does not necessarily indicate understanding, and access to information does not automatically lead to wise judgment. Excessive dependence on AI may also encourage cognitive offloading, weaken epistemic agency, and reduce opportunities for learners to engage in questioning, reasoning, interpretation, and reflection. The potential dehumanization identified in this study therefore does not refer to the replacement of humans by machines, but to the possibility that educational purposes become increasingly reduced to efficiency and informational performance.

The main contribution of this study is the formulation of a human-centred AI-mediated Islamic education framework, which positions AI as a supporting instrument rather than a substitute for human intellectual and moral agency. The framework places information access and generation at the beginning of the learning process, followed by human verification, critical interpretation, knowledge formation, reflection and moral judgment, and finally *adab* and responsible action. From the perspective of Islamic educational philosophy, this framework reinforces the understanding that education is ultimately concerned with human formation rather than merely the production of correct answers. The concepts of knowledge, wisdom, *adab*, and human responsibility provide an important philosophical basis for ensuring that technological advancement remains oriented toward the development of a knowledgeable, ethical, reflective, and God-conscious human being.

This study is limited by its reliance on library-based and philosophical-conceptual analysis; therefore, its arguments do not directly demonstrate how AI-mediated learning affects students' cognition, character, or *adab* in particular educational contexts. Future research could empirically examine the proposed framework through qualitative, quantitative, or mixed-methods studies

involving teachers and students in Islamic educational institutions. Such studies may investigate how different patterns of AI use influence critical thinking, epistemic agency, learning behaviour, and moral decision-making, as well as how *adab* can be operationalized within AI-mediated learning environments. Further research may also compare AI-supported learning practices across different levels and types of Islamic educational institutions to examine how human-centred principles can be translated into concrete pedagogical practices.

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