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PEDAGOGICAL MECHANISMS OF MORAL AND ETHICAL EDUCATION OF YOUNG PEOPLE IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE DEVELOPMENT

Abdurrokhmon Boydadaev
Teacher at General Education School No. 1 with Advanced Subject Studies (1-DIUM), Margilan City, Fergana Region, Uzbekistan
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Abstract: The rapid introduction of artificial intelligence into education has changed not only how young people obtain information, but also how they interpret authority, make choices and assume responsibility for their actions. This article examines the pedagogical mechanisms through which moral and ethical education can respond to these changes without reducing the problem to prohibitions or technical literacy. The study employs a qualitative, conceptual design based on critical analysis and thematic synthesis of scholarship in moral education, digital literacy and AI ethics. Its principal result is a five-part model comprising value-oriented dialogue, ethical problem-based learning, reflective authorship, relational responsibility and institutionally supported practice. The model links classroom experiences to moral sensitivity, judgment, motivation and action. The analysis argues that AI-generated answers become educationally useful when learners are expected to question their assumptions, explain their decisions and consider the people affected by them. Implications are discussed for secondary and higher education, including the culturally diverse educational setting of Uzbekistan. The proposed framework is an analytical contribution rather than an experimentally validated intervention; its effectiveness requires subsequent classroom research.

Keywords: artificial intelligence; moral education; ethical reasoning; youth; pedagogical mechanisms; digital citizenship; reflective learning.

INTRODUCTION

A student can now ask a conversational system to explain a difficult concept, write an apology, settle an argument or propose a response to a classmate's personal problem. Such exchanges appear ordinary, yet they pose a fundamental educational question: whose judgment is being exercised when a decision is composed by a machine? The issue is not simply that learners may copy generated text. It is that the practices through which young people learn to deliberate, disagree, care and accept consequences are being reorganized by increasingly persuasive digital tools.

Artificial intelligence (AI) creates genuine possibilities for learning. It can widen access to explanations, provide alternative perspectives and support pupils who need additional linguistic or instructional assistance. At the same time, generated responses can reproduce bias, conceal uncertainty or encourage the impression that complex moral questions have straightforward answers. Kasneci et al. (2023) highlight both educational opportunities and the need for critical evaluation, teacher oversight and sound pedagogical purposes. The question, therefore, is not whether AI belongs in education but under which conditions its use contributes to the formation of a responsible person.

Moral and ethical education involves more than knowledge of norms. A learner may correctly define fairness while disregarding the quiet exclusion of a classmate; may understand privacy yet share a photograph without permission; or may condemn dishonesty while submitting machine-generated work as personal achievement. These contradictions suggest a need to study

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the connection between moral concepts, emotional responsiveness, deliberate choice and habitual conduct. Rest's four-component approach, which distinguishes moral sensitivity, judgment, motivation and implementation, offers a helpful account of this connection (Rest, 1986).

The issue carries particular significance for Uzbekistan, where educational modernization and young people's growing digital participation coexist with a strong emphasis on respect, mutual responsibility, family relationships and cultural continuity. These commitments should not be treated as fixed slogans or as alternatives to technological progress. They must be made open to reasoned interpretation in actual situations: a dispute in a group chat, inaccurate information circulated about a peer, or an AI-produced answer that is convincing but unfair.

This article asks: what pedagogical mechanisms can help young people exercise independent moral judgment and responsible conduct in AI-mediated learning environments? Its purpose is to develop a coherent, practically interpretable framework rather than to report a survey or classroom experiment. Three tasks guide the analysis: clarify the changing ethical challenges of AI use; identify educational processes capable of addressing them; and propose criteria for evaluating those processes without confusing compliance with moral development.

MATERIALS AND METHODS

The study follows a conceptual-analytical research design. It draws together three bodies of scholarship: theories of moral development and character formation; educational discussions of critical thinking, dialogue and learner agency; and contemporary research on the opportunities and risks of AI in learning. The materials include foundational theoretical works and selectively chosen peer-reviewed studies and policy guidance relevant to children's rights and AI. This is a purposive conceptual synthesis, not a systematic review, meta-analysis or primary empirical investigation.

The analytical procedure consisted of four linked stages. First, recurrent educational problems were identified, including automation of judgment, unreliable informational authority, academic misrepresentation, privacy violations, discriminatory outputs and weakening of interpersonal accountability. Second, these problems were interpreted through moral sensitivity, judgment, motivation and action, rather than treated only as questions of technical skill. Third, practices from dialogic teaching, ethical case analysis, reflection and participatory education were grouped according to the learning process each activates. Fourth, these groups were formulated as pedagogical mechanisms with suggested activities and observable indicators.

Two assumptions establish the scope of this approach. AI systems are neither moral agents equivalent to students nor uniformly harmful instruments; the educational value of their use depends on human purposes and institutional conditions. Moreover, observable classroom behaviour is only partial evidence of moral growth. A student's polished ethical argument may conceal indifference, while uncertainty or disagreement may be evidence of sincere deliberation. For this reason, the framework recommends combining observations, reflective explanations and practical decisions instead of relying on a single numerical measure.

The analysis also uses Floridi and Cowls' (2019) account of beneficence, non-maleficence, autonomy, justice and explicability to examine how general principles of AI ethics may be translated into educational actions. The 2025 UNICEF guidance on AI and children informs consideration of safety, participation, inclusion and data protection. These references supply normative orientation; they do not provide experimental confirmation of the model developed here.

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RESULTS

The ethical challenge: from possessing answers to justifying choices

The conceptual analysis identifies a shift in the educational setting. Traditionally, teachers could often distinguish access to information from the learner's interpretation of it. Generative tools weaken that distinction because they provide interpretations and even ready-made justifications in fluent language. A learner who receives a plausible recommendation may no longer notice where a difficult moral decision began. The pedagogical task is to make that decision visible again: What is at stake? Who is affected? What information is missing? Which response can the learner defend as their own?

This shift produces several tensions. Convenience can conflict with intellectual honesty; personalized assistance with dependence; persuasive recommendations with independent judgment; and data-driven efficiency with privacy or fairness. These tensions cannot be resolved by teaching students a list of acceptable prompts. They require repeated opportunities to move from rule recognition to explanation, choice and action. The result of the synthesis is a model of five mutually reinforcing mechanisms.

Value-oriented dialogue

The first mechanism is structured dialogue around competing values. Teachers introduce questions without pretending that all disagreements can be settled by a correct definition. For instance, learners can examine whether it is permissible to use a writing assistant for a scholarship application when the application is intended to reveal their own voice. One student may emphasize equal access to support; another may defend authenticity; a third may distinguish language correction from the invention of experiences. The teacher's role is to demand reasons and maintain respect, not to replace discussion with a prepared moral verdict.

Dialogic work should attend especially to students whose opinions are less readily heard. Respect is learned through participation in a conversation in which disagreement does not lead to humiliation. The connection to AI is direct: students can compare a generated moral recommendation with their own arguments, identify what the system overlooks and rewrite the recommendation in terms they are willing to defend. The central learning outcome is not agreement but accountable reasoning.

Ethical problem-based learning

The second mechanism uses realistic dilemmas involving digital tools. Cases may concern an altered photograph shared without consent, an AI translation that misrepresents a culturally sensitive statement, or an automatically generated summary that assigns blame to the wrong person. Each case requires learners to name stakeholders, distinguish verified facts from speculation, compare possible actions and anticipate consequences. Moral principles are thus encountered as practical demands rather than detached statements.

A useful classroom routine has four questions: What happened? Whose interests or rights are involved? Which options are defensible, and why? What would responsible action look like after the discussion ends? Students may consult AI to develop alternative interpretations, but the final assessment concerns the quality of their evidence, ethical reasoning and proposed response. This design keeps the machine in the role of a resource while preserving the student as the author of the decision.

Reflective authorship and critical verification

The third mechanism links moral development to the experience of authorship. Students should be able to distinguish work they created, work they revised with assistance and work generated substantially by a system. Disclosure is not a ritual confession: it helps learners understand the boundary between support and substitution. Reflection journals can document

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why an AI suggestion was accepted, changed or rejected, what uncertainty remained, and what the learner would do differently.

Critical verification is also an ethical habit. Before circulating a generated claim about another person, the learner asks whether it is substantiated and whether sharing it may cause harm. Before adopting a stereotyped answer, the learner asks which voices or circumstances have been excluded. Such procedures combine information literacy with responsibility toward others. They move beyond a narrow concern with academic plagiarism and address the broader problem of speaking or acting without sufficient grounds.

Relational responsibility and community participation

The fourth mechanism rests on the insight that moral life happens between people. Students can produce polished descriptions of empathy with AI assistance while remaining inattentive to actual classmates. Pedagogy must therefore create situations where respectful attention and cooperative conduct are necessary: peer feedback, shared problem solving, community projects and restorative conversations after digital conflicts. The goal is to connect abstract principles with the effort of listening, repairing mistakes and honouring commitments.

In culturally diverse learning groups, such activities allow students to examine the meaning of respect rather than assume everyone defines it in the same way. A small community project—such as preparing accessible guidance on digital privacy for younger pupils—requires participants to consider language, audience and potential harm. Their work can be assessed through the responsiveness of the final product and the collaborative process, not simply its technical sophistication.

Institutionally supported ethical practice

The fifth mechanism concerns institutional consistency. A teacher cannot convincingly promote responsibility when a school uses opaque AI-based decisions, exposes student data or punishes all assistance without explaining why. Educational institutions need transparent expectations for acceptable AI use, age-appropriate privacy safeguards, means of questioning automated outcomes and professional development for staff. Students should be invited to participate in discussing rules that shape their learning. Policies become educational when their reasons are understood and their implementation is fair.

These mechanisms operate as a sequence but not a rigid ladder. Dialogue can reveal a dilemma, a dilemma can prompt verification, reflection can lead to action, and action can expose weaknesses in school policy. Their common thread is the transfer of responsibility back to the learner and the educational community.

Operational framework for teaching and evaluation

The proposed framework can be applied in a short instructional cycle. In the opening session, students examine an ethically ambiguous AI-generated response; in the next, they reconstruct a case and identify affected persons. A third session compares alternatives through dialogue; a fourth asks students to take or design a responsible action; and a final reflection considers what changed in their judgment. The cycle can be adapted to language education, civic education, philosophy or professional preparation.

Pedagogical mechanism	Learning activity	Observable evidence
Value-oriented dialogue	Discussion of conflicting values in AI-generated advice	Reasons offered; respectful response to disagreement
Ethical case analysis	Stakeholder mapping and choice among alternatives	Recognition of harm; justified decisions
Reflective authorship	Annotated AI use and	Clear disclosure; independent

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	reflection journal	revision
Relational responsibility	Peer feedback and community-oriented tasks	Listening; repair of harm; collaboration
Institutional practice	Co-created rules and critical review of tools	Fair procedures; student participation

Table 1. Proposed mechanisms, classroom practices and qualitative indicators. The indicators are suggested for pedagogical observation, not presented as a validated measurement instrument.

Evaluation should focus on development over time. Evidence may include a student's initial and revised judgment in a case, a teacher's observation of discussion, records of responsible decision-making, and the student's explanation of the consequences of an action. A rubric could consider four dimensions—recognition of affected parties, adequacy of reasons, willingness to revise a position, and consistency between stated values and conduct—without pretending that moral character can be reduced to a grade. Learners' privacy and their right to disagree should be protected during any such assessment.

DISCUSSION

The proposed model complements familiar accounts of moral education while responding to a distinctive feature of AI-mediated learning: the availability of fluent judgments that learners have not produced themselves. Dewey (2016) treated education as inseparable from shared experience and participation in social life. Similarly, the model presented here assumes that responsibility develops through the consequences of inquiry and cooperation. AI does not eliminate this process, but it may hide it when a completed answer arrives before a question has been examined.

The emphasis on dialogue is also consistent with the understanding that ethical judgments grow through encounters with perspectives other than one's own. In practice, teachers must resist two equal temptations: treating the machine as an unquestioned authority and portraying any use of it as a moral failure. The first approach weakens agency; the second can make legitimate experimentation secretive. Open, reasoned standards offer a more credible middle path. Floridi and Cowls' (2019) principle of explicability is particularly relevant: learners should be able to ask both why a recommendation appears and who bears responsibility for acting on it.

There is also a difference between teaching about AI ethics and educating ethically with AI. The first involves concepts such as bias, surveillance and fairness. The second concerns the conditions under which a learner experiences fairness, honesty and mutual care while using technological assistance. A lecture about privacy cannot compensate for a classroom practice that encourages students to upload private information about classmates. Institutional arrangements are therefore not external to moral education; they form part of the moral environment students observe.

The model is intended to remain adaptable to national and local educational traditions. In Uzbekistan, teachers may draw on the language of dignity, respect for elders, mutual assistance and collective responsibility. Yet these values become pedagogically meaningful only when learners can examine their application to new circumstances. A respectful student should be able to challenge an inaccurate automated recommendation without insulting others; a socially responsible student should be able to protect a friend's dignity even when a harmful post is popular. Cultural grounding and critical reflection need not be opposites.

Several limits deserve attention. The article does not establish whether the five mechanisms improve measurable outcomes, whether one is more effective than another, or how their effects

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vary by age. Nor does it assume that all learners have equal access to devices, reliable connectivity or experienced teachers. Differences in language proficiency, disability, socioeconomic circumstances and institutional resources may shape implementation. Future research should therefore pilot the framework in different educational settings and investigate its feasibility through observations, interviews, analysis of reflective work and carefully designed comparative studies.

One methodological difficulty will be separating authentic ethical development from students' ability to produce language that sounds ethical. Evaluation must be longitudinal and triangulated: what learners say in a discussion, how they account for a mistake, and how they behave in collaborative tasks may not coincide. This is not a defect of the framework but a reminder that moral education addresses human conduct, not merely performance on written assessments.

CONCLUSION

Artificial intelligence has made moral and ethical education more urgent precisely because it has made answers easier to obtain. Young people need opportunities to examine values, recognize those affected by decisions, verify persuasive claims and act with responsibility toward others. These abilities cannot be supplied by a technical course alone or secured through blanket prohibitions. They require pedagogical relationships and institutional practices that repeatedly return moral choice to the learner.

The article offers five connected mechanisms: value-oriented dialogue, ethical problem-based learning, reflective authorship, relational responsibility and institutionally supported ethical practice. Together, they form a conceptual model that translates abstract ethical principles into classroom routines and qualitative indicators. The model's contribution lies in integrating responsible AI use with the wider purposes of moral formation. Its empirical effectiveness remains to be tested. The immediate educational implication is clear: AI should enrich the range of questions students can consider, without displacing their responsibility to decide, explain and care.

REFERENCES

1. Dewey, J. (2016). Democracy and Education: An Introduction to the Philosophy of Education. Macmillan.
2. Floridi, L., & Cowls, J. (2019). A unified framework of five principles for AI in society. Harvard Data Science Review, 1(1). https://doi.org/10.1162/99608f92.8cd550d1
3. Kasneci, E., Sessler, K., Küchemann, S., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. Learning and Individual Differences, 103, 102274. https://doi.org/10.1016/j.lindif.2023.102274
4. Rest, J. R. (1986). Moral Development: Advances in Research and Theory. Praeger.
5. UNICEF Innocenti. (2025). Guidance on AI and Children (Version 3.0). UNICEF. https://www.unicef.org/innocenti/reports/policy-guidance-ai-children