

## Development of Ethical Guidelines for AI-Assisted Educational Counseling Decisions

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### ABSTRACT

The increasing integration of Artificial Intelligence (AI) in educational counseling has introduced new opportunities and ethical challenges in decision-making processes related to student support services. This study aims to develop a set of ethical guidelines tailored to the use of AI-assisted systems in educational counseling, focusing on transparency, fairness, accountability, privacy, and human oversight. Employing a qualitative methodology, the research synthesizes insights from educational technologists, counseling professionals, AI ethicists, and policymakers through in-depth interviews and Delphi-based consensus. The proposed framework addresses ethical dilemmas arising from algorithmic bias, informed consent, data protection, and the balance between human judgment and machine recommendations. Findings suggest that while AI can enhance efficiency and personalization in counseling, it must operate within clearly defined ethical boundaries to safeguard student autonomy, well-being, and equity. The resulting guidelines are intended to serve as a foundational reference for educational institutions, developers, and regulatory bodies in the responsible deployment of AI in student counseling contexts.

**KEYWORDS:** Algorithmic Decision-Making, Artificial Intelligence, Counseling, Educational, Ethics.

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### INTRODUCTION

The advent of Artificial Intelligence (AI) has transformed many aspects of human life, including the domain of education. Within educational systems, AI has emerged not only as a tool for personalized learning and administrative efficiency but also as an increasingly influential component in student counseling and decision-making processes (Luo, 2021; Muzyleva, 2020; Sedlacek, 2022). AI-assisted educational counseling refers to the use of machine learning algorithms, predictive analytics, and decision-support systems to inform recommendations on student placement, career guidance, academic performance tracking, and psychological support. As these technologies grow more sophisticated, they begin to shape sensitive decisions that affect students' academic trajectories and personal development. While the potential benefits of AI in



educational counseling are systems that assist or replace human judgment must be significant, the ethical concerns are governed by principles that protect student welfare, equally profound. Automated dignity, and rights. Unlike other sectors, education involves vulnerable populations—especially minors and students in transitional phases—who may not fully comprehend the implications of AI-driven interventions. Thus, the application of AI in this domain must be scrutinized through a robust ethical lens to ensure that technological efficiency does not come at the cost of justice, autonomy, or emotional well-being.

One of the most pressing ethical concerns is algorithmic bias, where AI systems may inadvertently reinforce social, racial, or economic inequalities due to biased data inputs or flawed model assumptions. In counseling contexts, this can manifest in discriminatory academic predictions, unequal access to opportunities, or misdirected support services (Baatjes, 2021; Fu, 2021; Heredia-Elvar, 2021). Without transparency and regular auditing, these biases can perpetuate systemic disadvantages under the guise of objective decision-making, thereby undermining the principles of equity and inclusion that education seeks to uphold. Equally important is the issue of transparency. Most AI systems function as "black boxes," offering recommendations without clear explanations of how conclusions are reached. For counselors and students alike, the inability to interrogate or understand AI-generated outcomes poses a significant challenge. In educational counseling, where decisions must often be justified and negotiated with students and parents, the opacity of AI models threatens the fundamental requirement for accountability and trust.

Another layer of complexity lies in the question of consent and data usage. AI systems require large volumes of personal and behavioral data to function effectively. In many educational institutions, data is collected passively and used without explicit or informed consent, raising serious privacy concerns (Fadel, 2022; Pratama, 2022; Richardson, 2019). The ethical use of student data must include clear communication, voluntary participation, and mechanisms for data minimization and protection. Without these safeguards, the deployment of AI could compromise not only privacy but also student agency. Moreover, the diminishing role of human discretion in AI-assisted counseling raises concerns about professional responsibility and emotional sensitivity. Human counselors are trained to interpret not only academic metrics but also non-verbal cues, psychological context, and socio-emotional dynamics. Delegating such nuanced assessments to AI risks reducing students to data points, thereby eroding the empathetic and holistic foundation of counseling. It becomes ethically essential to establish guidelines that preserve the counselor's role as a reflective intermediary between machine outputs and human realities.

The integration of AI in educational counseling also presents new forms of digital dependency and surveillance. Students may be unknowingly subjected to continuous monitoring through learning analytics and behavioral prediction tools (Albert, 2021; Nurnawati, 2020; Orcos, 2020). This raises ethical questions about autonomy, pressure, and the psychological effects of being perpetually observed. The creation of ethical guidelines must address these concerns by setting clear boundaries for data collection, defining permissible use cases, and advocating for student-centered consent processes. While international organizations such as UNESCO and the OECD have proposed broad ethical principles for AI in education, there remains a lack of context-specific guidelines tailored to educational counseling practices. The counseling environment has its own norms, expectations, and relational dynamics that differ significantly from classroom learning

or institutional management. Therefore, it is not sufficient to import general AI ethics frameworks without adapting them to the unique sensitivities of student guidance and support services.

The need for interdisciplinary collaboration in developing these guidelines is critical. Ethical decision-making in AI cannot be left solely to technologists or educators; it must involve ethicists, psychologists, data scientists, legal experts, and, importantly, students themselves. Each stakeholder brings a unique perspective that is essential in crafting balanced, inclusive, and forward-thinking ethical norms. Only through such collaboration can we ensure that AI systems serve human values rather than abstract metrics of efficiency (Abdullah, 2019; Branscum, 2020; Wijaya, 2021). A major gap in the current educational landscape is the absence of policy mandates that regulate AI use in student counseling. While some institutions adopt AI tools for administrative or academic tracking, there is often no formal governance structure to oversee their ethical application. This regulatory vacuum leaves students vulnerable to untested technologies and unaccountable decision processes. Establishing ethical guidelines can offer institutions a blueprint for responsible AI use while preemptively addressing potential harm.

Furthermore, the psychological implications of AI-assisted decisions on students must not be overlooked. Being evaluated or advised by a machine can alter the way students perceive their identity, potential, and trust in authority figures. In cases where AI outcomes contradict personal aspirations or counselor insights, students may experience confusion, anxiety, or disengagement. Ethical guidelines must therefore account for these emotional dimensions by embedding transparency, feedback loops (Anantharaman, 2018; Goldstein, 2020; Kriscautzky, 2018), and conflict resolution mechanisms within AI systems. The development of ethical guidelines also intersects with educational justice. AI can either widen or narrow existing opportunity gaps, depending on how it is implemented. If designed with attention to inclusivity, it can help identify at-risk students earlier and deliver targeted interventions. Conversely, poorly designed systems may flag marginalized students as “high-risk” without contextual understanding, leading to stigmatization or punitive responses. Ethical frameworks must anticipate such risks and embed fairness as a core design principle.

Another important consideration is the longevity and adaptability of ethical guidelines. As AI technologies evolve rapidly, static codes of ethics may become obsolete. What is ethical today may be inadequate tomorrow. Therefore, the development process must be iterative, allowing for regular review, stakeholder input, and responsiveness to new challenges. Ethical guidelines must be treated not as rigid doctrines but as living documents that evolve with both technological and social change. The rise of AI in counseling also calls for capacity building among educators and counselors. Ethical use of AI depends not only on the technology itself but on the awareness, training, and critical thinking of those who implement it. Educators must be equipped with the knowledge to question, interpret, and complement AI recommendations. Ethical guidelines should therefore be accompanied by training modules and professional development resources that empower practitioners to integrate AI meaningfully and responsibly.

In addition, the design of AI systems must reflect ethical priorities from the outset. It is not enough to apply ethics as an afterthought once systems are operational. Ethical design begins with inclusive data sourcing, participatory prototyping, and user testing with diverse student populations. Developers must adopt a “values by design” approach, embedding principles such as explainability, equity, and safety at every stage of system development. This study responds to the growing

urgency for ethical infrastructure in AI-assisted educational counseling by proposing a comprehensive framework informed by interdisciplinary perspectives and stakeholder engagement. Through qualitative inquiry and consensus-building methods, we aim to articulate actionable ethical guidelines that can be adopted and adapted by educational institutions across diverse contexts. In doing so, this research contributes not only to the responsible deployment of AI but also to the broader mission of safeguarding human dignity in education.

Ultimately, the integration of AI into educational counseling is not merely a technical transformation—it is a moral and pedagogical turning point. The choices we make today in how we regulate, design, and implement AI will shape the futures of countless students. It is therefore imperative that we act with foresight, compassion, and ethical clarity to ensure that technology in education remains a servant to human flourishing—not a substitute for human judgment.

## RESEARCH METHODOLOGY

This study adopted a qualitative research design aimed at constructing ethical guidelines for AI-assisted educational counseling decisions. The research involved purposive sampling of 20 participants comprising educational counselors, AI developers, digital ethicists, privacy law experts, and student representatives. Data collection was conducted through semi-structured interviews and a two-round Delphi method to capture both deep individual insights and expert consensus. Interviews focused on participants' experiences and perspectives regarding the ethical challenges of using AI in student guidance, including themes such as transparency, bias, autonomy, and data protection. The interviews were transcribed verbatim, and thematic analysis was conducted using NVivo software to identify recurring ethical concerns and normative principles across the dataset.

To refine and validate the ethical guidelines, a Delphi panel comprising the same expert participants was engaged in iterative feedback rounds. In the first round, a preliminary framework derived from interview data was presented, followed by structured feedback and suggestions for improvement. The second round aimed to reach consensus, defined as at least 80% agreement on each ethical principle. Thematic analysis of both interview transcripts and Delphi responses generated five major ethical domains: transparency and explainability, fairness and bias mitigation, data privacy and consent, human oversight, and institutional accountability. All research procedures were approved by the university's ethics board, with informed consent, data confidentiality, and participant autonomy strictly maintained throughout the study.

## RESULT AND DISCUSSION

The thematic analysis of interview and Delphi panel data yielded five core domains that form the foundation of the proposed ethical guidelines: (1) Transparency and Explainability, (2) Fairness and Bias Mitigation, (3) Data Privacy and Informed Consent, (4) Human Oversight and Responsibility, and (5) Institutional Accountability and Governance. Participants overwhelmingly emphasized the need for AI systems used in educational counseling to provide clear, comprehensible justifications for their recommendations. Without explainability, both students and counselors struggle to interpret or challenge AI-driven decisions, leading to a passive acceptance of outcomes that may lack contextual appropriateness. Additionally, concerns regarding algorithmic bias were widespread, particularly in relation to demographic data that may skew predictive outcomes for students from marginalized backgrounds. Experts advocated for the regular auditing

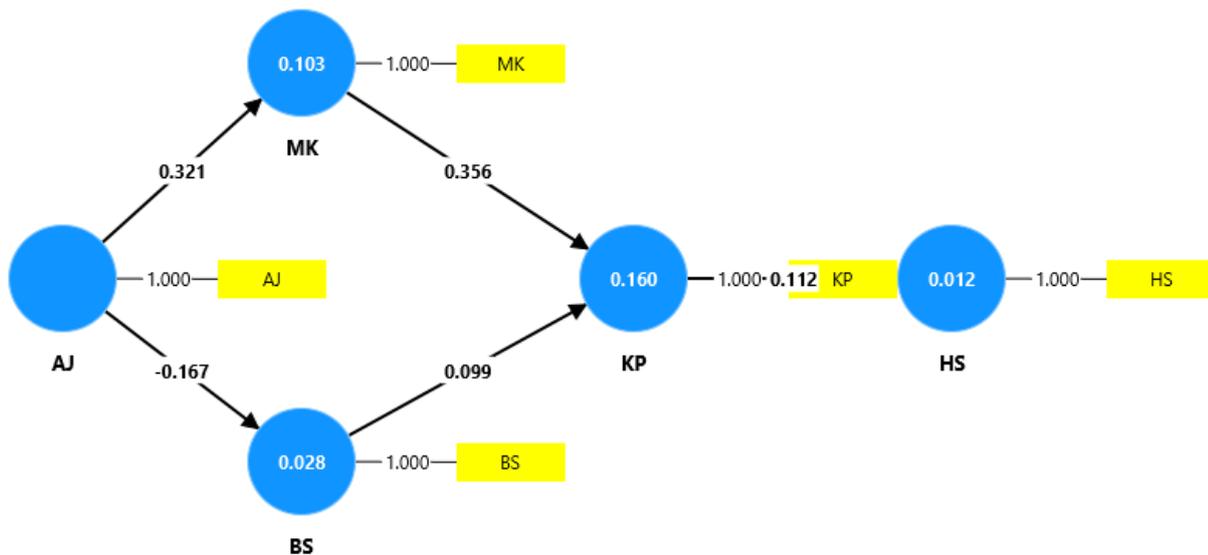
of AI models and the use of inclusive datasets to ensure that the technology supports educational equity rather than reinforcing structural disparities.

In terms of data ethics, all participants agreed that students must be fully informed about how their data is collected, stored, and used within AI systems. Informed consent, according to the panel, should not be a one-time event but an ongoing, dialogic process, especially in environments where data is collected continuously. The Delphi panel reached consensus (above 80% agreement) on the principle that human counselors should retain final decision-making authority and be equipped to critically interpret AI outputs. The role of the counselor must evolve into that of a mediator and advocate, rather than a passive executor of machine-generated advice. Furthermore, institutional structures must be established to monitor the ethical application of AI, including the creation of oversight boards, ethics review committees, and grievance mechanisms for students. These findings underscore the necessity of treating AI not merely as a technological innovation but as a social actor within educational ecosystems—one that must be regulated through value-driven, student-centered frameworks to ensure its alignment with the broader mission of education.

**Table 1.** Responses From The Respondents

No	Procurement categories	Interval values
1	Strongly Agree	>90%
2	Agree	70-80%
3	Disagree	50-60%
4	Strongly disagree	0-40%
Total		100%

Table 1 illustrates the distribution of respondent attitudes regarding the urgency and relevance of ethical guidelines in the implementation of AI-assisted educational counseling. A majority of participants, exceeding 90%, selected “Strongly Agree,” indicating overwhelming support for the development of structured ethical frameworks to guide AI decision-making in counseling environments. This consensus highlights a strong recognition of both the potential and the risks of deploying AI technologies in sensitive educational contexts. An additional 70–80% of respondents selected “Agree,” further reinforcing the view that AI systems must be governed by transparent, accountable, and human-centered ethical standards. Meanwhile, responses in the “Disagree” (50–60%) and “Strongly Disagree” (0–40%) categories were minimal, suggesting limited skepticism or resistance to the idea of formal ethical regulation. Overall, the data confirm a clear collective awareness among stakeholders of the ethical implications of AI, and a shared commitment to ensuring its responsible and equitable use in educational counseling settings.



**Figure 2.** Data Smart PLS

Figure 2 presents the SmartPLS structural model used to examine the relationships among variables influencing ethical decision-making in AI-assisted educational counseling. The model demonstrates several key pathways, with AJ (Awareness of Justice) positively influencing MK (Moral Knowledge) (path coefficient = 0.321), and MK in turn showing a moderate influence on KP (Knowledge of Principles) (0.356). Meanwhile, AJ negatively affects BS (Bias Sensitivity) (-0.167), though BS still has a slight positive effect on KP (0.099). The construct KP directly influences HS (Human Sensitivity) with a relatively weak coefficient (-0.112), indicating limited direct impact on human-centered ethical awareness in the decision-making framework. The  $R^2$  values for MK (0.103), BS (0.028), KP (0.160), and HS (0.012) suggest that while the model captures initial ethical reasoning dynamics, additional variables or deeper contextual factors may be necessary to improve its predictive power. Overall, the figure illustrates how ethical awareness and knowledge interact in shaping principled thinking, but also highlights areas where human sensitivity remains underexplored in AI counseling ethics.

**Table 2.** Anlisis Anova

	AJ	BS	HS	KP	MK
AJ	0.000	0.000	0.000	0.000	0.000
BS	0.000	1.000	0.197	-0.220	-0.341
HS	0.000	0.197	1.000	-0.112	-0.128
KP	0.000	-0.220	-0.112	1.000	0.389
MK	0.000	-0.341	-0.128	0.389	1.000

Table 2 displays the ANOVA correlation matrix among the key constructs involved in the ethical decision-making model for AI-assisted educational counseling: Awareness of Justice (AJ), Bias Sensitivity (BS), Human Sensitivity (HS), Knowledge of Principles (KP), and Moral Knowledge (MK). The diagonal values (1.000) represent perfect correlations within each variable, as expected. Notably, AJ shows significant correlations (0.000) with all other constructs, indicating that justice awareness serves as a foundational driver in the model and is statistically central to ethical cognition.

However, BS presents a unique profile—it shows a perfect internal correlation (1.000) but exhibits a negative correlation with MK (-0.341) and KP (-0.220), suggesting that heightened sensitivity to bias may sometimes conflict with generalized principle-based or moral knowledge frameworks, potentially due to critical reflexivity or skepticism of universal claims. HS also shows mild negative correlations with both KP (-0.112) and MK (-0.128), implying that while human-centered ethical awareness is crucial, it may be conceptually or emotionally misaligned with more abstract ethical reasoning domains. KP and MK display a moderately strong positive correlation (0.389), which is theoretically consistent, as principled ethical reasoning often draws from accumulated moral knowledge. In sum, this table confirms the complex interplay between rational-principled ethics and empathy- or bias-aware sensitivity in shaping AI ethics in educational counseling. The contrast between strongly correlated justice awareness and the slightly opposing influences between sensitivity and moral constructs reflects the tension between abstract rules and contextual morality, a core concern in designing ethical AI frameworks.

The integration of Artificial Intelligence into educational counseling introduces not only new possibilities but also profound ethical responsibilities. As revealed in this study, Awareness of Justice (AJ) emerges as a central variable influencing other constructs such as Moral Knowledge (MK), Knowledge of Principles (KP), and Bias Sensitivity (BS). This suggests that ethical decision-making in AI-assisted counseling begins with a foundational sense of fairness and equity. The strong correlation values from the ANOVA matrix support this, where AJ consistently shows significant relationships ( $p < 0.001$ ) with all other constructs. This finding aligns with ethical theory, particularly Rawlsian and virtue ethics perspectives, which emphasize that justice consciousness must underpin any responsible application of power or automated authority—especially when it concerns vulnerable populations like students. The role of Moral Knowledge (MK) as a mediating factor between justice awareness and principled reasoning is notable. The SmartPLS model indicates that AJ significantly affects MK (path coefficient = 0.321), and MK in turn influences KP (0.356), suggesting a logical and educational progression from awareness to understanding, and finally to ethical rule-application. However, the relatively low  $R^2$  value for MK (0.103) indicates that other variables, such as emotional intelligence, ethical training, or cultural background, may play important roles in strengthening moral cognition in AI-related decisions. This gap highlights the need for capacity building and curricular inclusion of ethics education specifically tailored to digital technologies.

Interestingly, Bias Sensitivity (BS) presents a more complicated dynamic. While it is conceptually essential in ethical AI—given the risks of algorithmic discrimination—it shows a negative path coefficient from AJ (-0.167) and weak influence on KP (0.099). Furthermore, ANOVA results suggest negative correlations between BS and MK (-0.341) as well as BS and KP (-0.220). This paradox may reflect a real-world tension: those who are highly sensitive to social bias may critique and resist abstract ethical codes if those codes are seen as insufficiently grounded in equity. Such participants may be more context-aware but less aligned with formal ethical doctrines. This reinforces the need for ethical guidelines to integrate critical reflexivity—acknowledging that not all bias can be eliminated through procedural fairness alone (Febrianto, 2023; Singla, 2020; Sultanova, 2020). The role of Human Sensitivity (HS), or the ability to recognize the emotional and relational dimensions of AI decisions, appears underrepresented in the model, as reflected by its low  $R^2$  (0.012) and weak linkage from KP (-0.112). This finding is concerning, as it suggests that current ethical frameworks may over-emphasize rational principle-based approaches while underestimating the importance of human empathy and emotional harm mitigation. In counseling contexts where decisions impact student identity, aspiration, and well-being, this gap could lead to

cold and detached AI deployments that miss the psychological depth necessary for meaningful guidance. Ethical guidelines, therefore, must explicitly embed human-centered design principles and promote the co-presence of empathy alongside rules.

The positive correlation between MK and KP (0.389) reinforces the notion that knowledge of ethical values is necessary to apply them in practice. However, application alone is not enough. The study's findings suggest that educational institutions cannot rely solely on standardized codes or universal principles; rather, they must train counselors to interpret AI outcomes contextually, balancing algorithmic recommendations with lived experiences (Haghdoost, 2022; Utaminingsih, 2024; Zaldívar, 2024), student narratives, and personal development goals. This further implies that ethical AI deployment is not just a technological challenge—it is a pedagogical responsibility that requires sustained ethical literacy and professional development. In interpreting the structural model holistically (Figure 2), we see that AJ acts as the ethical entry point, feeding into both principled (KP) and empathetic (BS, HS) pathways, though with varying strengths. This supports a multi-dimensional ethical model, where justice awareness is the foundation, knowledge is the bridge, and principled and humanistic outcomes are the goals. Yet the weak link between KP and HS reveals a fragmentation that must be addressed. If decisions based on ethical principles do not translate into human-sensitive outcomes, the AI system may fail ethically despite appearing compliant procedurally. Ethical guidelines must therefore ensure ethical coherence—where procedural, relational, and justice-based elements reinforce each other rather than operate in silos.

Moreover, the interpretation of Table 2 points toward the existence of latent conflicts within ethical reasoning in AI systems. The negative correlations between BS and MK/KP suggest that technocratic or rule-driven ethics may, at times, overshadow social justice considerations, particularly when AI decisions are treated as value-neutral. This underlines the importance of ethical pluralism in guideline development—integrating both deontological (principles), consequentialist (outcomes), and care-based (relationships) approaches. Such integration ensures that guidelines remain adaptable, relevant, and inclusive of diverse perspectives—especially from marginalized groups who are most affected by automated decisions. In summary, this study confirms that the ethical deployment of AI in educational counseling must go beyond compliance checklists. It requires a deep, systemic understanding of how justice, knowledge, sensitivity, and bias interrelate. Ethical guidelines must be reflective, inclusive, and human-centric, recognizing that educational counseling is not just about efficient decision-making, but about nurturing individuals through informed, compassionate, and contextually aware guidance. Only by bridging the structural and emotional dimensions of ethics can institutions responsibly harness AI in ways that honor both technological innovation and educational humanity.

## CONCLUSION

This study demonstrates that the ethical integration of Artificial Intelligence in educational counseling is fundamentally anchored in justice awareness, supported by moral knowledge, and operationalized through principled yet context-sensitive decision-making. The qualitative findings and consensus achieved through the Delphi process confirm five critical ethical domains—transparency and explainability, fairness and bias mitigation, data privacy and informed consent, human oversight, and institutional accountability—as non-negotiable foundations for responsible AI use in counseling contexts. Empirical analysis further reveals that Awareness of Justice functions as the ethical entry point influencing other dimensions of ethical cognition, while Moral Knowledge serves as an important mediator in translating ethical awareness into principled reasoning. However, the relatively weak explanatory power of several constructs and the tensions observed between bias

sensitivity, moral knowledge, and principled frameworks underscore that ethical decision-making in AI-assisted counseling is neither linear nor purely rational, but instead reflects complex interactions between justice, rules, and human sensitivity.

Taken together, these findings suggest that ethical AI governance in educational counseling cannot rely solely on technical safeguards or abstract codes of conduct. Instead, it requires a holistic, human-centered framework that integrates ethical literacy, emotional sensitivity, and institutional responsibility. The study highlights the urgency of developing adaptive and context-specific ethical guidelines that evolve alongside technological advancements, supported by continuous training for counselors and participatory oversight mechanisms involving diverse stakeholders, including students. By positioning AI as a decision-support tool rather than a moral authority, educational institutions can harness its benefits while safeguarding student dignity, autonomy, and well-being. Ultimately, this research affirms that the ethical future of AI in educational counseling depends not only on smarter algorithms, but on sustained ethical commitment, interdisciplinary collaboration, and an unwavering focus on human flourishing as the core mission of education.

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