

**Ethical Behavior, Diversity, Civil Discourse, and Online K-12 Educational Leadership: A
Literature Review**

Rodney Clarkson

Capella University

EDD-FPX8010

Foundations of Doctoral Studies in Education

Ethical Behavior, Diversity, Civil Discourse, and Online K-12 Educational Leadership: A Literature Review

Introduction

K-12 education is transforming from traditional models to adaptive instruction using artificial intelligence (AI) to enable personalized learning that meets students' individual needs. According to Chan et al. (2026), this adoption effectively incorporates AI into complex education systems and requires frameworks that align governance and infrastructure to mitigate risks while ensuring equitable learning environments. Ethics, diversity, and civil discourse operate as interdependent, not discrete, concerns. This review discusses how responsible AI-driven personalized learning depends on three interdependent leadership responsibilities: maintaining human accountability for algorithmic decisions that may hold bias, ensuring equitable and culturally responsive personalization for diverse learners, and including stakeholders in AI governance discussions. The paper first provides an overview of how these issues operate within educational leadership, then analyzes the scholarly literature, and closes by synthesizing the relationships.

Overview of Issues

The K-12 online ecosystem is inherently complex. Educational leaders must use a "Systems Approach" to navigate AI's inherent dynamism and its integration into instruction, learning, assessment, and administration. No single educational component is independent. Kim et al. (2026) underscore the importance of systems thinking for leaders implementing AI technology across the K-12 ecosystem. The principal diversity concern is inequitable access to culturally and academically responsive AI-personalized learning. The primary ethical concern is algorithmic bias and the human accountability required (Akgun & Greenhow, 2022). The

principal civil discourse concern is the absence of inclusive stakeholder deliberation about AI adoption. These concerns operate as a sequence rather than as a list. A system trained on unrepresentative data may produce a less demanding pathway for a student whose profile resembles that of underserved learners. This reflects a failure of ethical accountability that affects diversity. Correcting it requires a forum where teachers, families, and students can voice their concerns. Because these domains are interdependent, AI's impact on any single component will affect the system, either positively or negatively.

Diversity Issue Related to the Specialization

This review focuses on equitable access to culturally and academically responsive AI-personalized learning. AI can enhance content accessibility, personalization, and inclusivity regardless of location, ethnicity, disability, language, or social background. Capacity depends on what a system can observe about a learner and what it has been built to offer. In an online school environment, a student with poor home internet connectivity produces irregular interaction data. As a result, the system has less information about that learner than it does for comparable students with reliable internet access. AI models trained primarily on native-speaker texts may incorrectly identify a multilingual student's writing as deficient. The resulting remediation may reveal flaws in the model rather than deficiencies in the student's abilities. In both cases, personalization functions as designed but produces inequitable outcomes. The platform's performance data may not reveal this disparity.

Culturally relevant pedagogy offers leaders a standard against which to evaluate such outcomes. Educators have conceptualized culturally relevant pedagogy (CRP) as an approach that considers students' diverse cultural heritage in curriculum design. Additionally, culturally responsive teaching (CRT) adapts to applicable contexts in curriculum development and lesson

delivery (Wang et al., 2025). CRP incorporates academic excellence, cultural competence, and critical consciousness, tenets that support equity among diverse student populations. Viano and Darling-Aduana (2026) concur that online educators need to develop content-specific guidelines aligned with those tenets. Applying these principles to an adaptive system requires examining both its effect on achievement and whether its content reflects the students it serves. According to Johnson et al. (2023), successful learning outcomes require educational leaders to capitalize on multimedia applications to minimize cognitive load. This practice supports adaptive technologies such as pedagogical agents (PAs), virtual characters designed to deliver instructional modules that have proven effective in face-to-face settings (Zhang et al., 2024). Leaders must ensure these tools promote personalization and equity consistent with CRP principles.

Ethical Behavior Issue Related to the Specialization

The ethical concern selected for this review is algorithmic bias and the transparency and human accountability it demands. A recurring theme in K-12 literature is algorithmic bias, which may reflect historical prejudices embedded in the datasets used to develop these systems. Data privacy concerns arise when large amounts of personal information are shared through digital platforms without adequate human oversight (Akgun & Greenhow, 2022). In online K-12 settings, the central ethical concern is not simply that a system makes errors, but that those responsible for its outcomes may be unable to understand its reasoning. When an adaptive platform recommends a slower instructional sequence, flags an at-risk student, or scores an extended written response, the output carries institutional weight without an accompanying account that a teacher can interrogate. A teacher who accepts the recommendation has deferred

to a process that cannot be inspected, and a teacher who overrides it has assumed a burden of proof the system itself was never required to meet.

Such dilemmas require choosing between competing ethical principles rather than between right and wrong. Behavioral data enables responsive personalization but also creates continuous surveillance of minors. Similarly, automation may reduce teachers' workloads while distancing them from decisions made about their students. Leaders must determine in advance which academic decisions require human review before implementation. They must also clearly identify who is accountable when an AI-supported decision changes a student's academic trajectory.

Civil Discourse Issue Related to the Specialization

The civil discourse concern selected for this review is the absence of inclusive stakeholder deliberation concerning AI adoption. Civil discourse in this context means more than courteous disagreement. It is a professional process through which competing values are examined, evidence is weighed, underrepresented perspectives are included, and defensible decisions are reached and recorded. Rapid advances in K-12 educational AI have intensified debate about its benefits and risks. Meanwhile, adaptive pedagogical frameworks, policies, and governance structures have struggled to keep pace with its development.

Stakeholders do not hold a single position on these questions. Han et al. (2024), who hosted a workshop with 12 families and interviewed teachers about generative AI in elementary learning, found that parents and teachers held reservations centering on safety, data privacy, and erosion of critical thinking and problem-solving skills, whereas students viewed AI positively and acknowledged its complementary role. Parents are key stakeholders in educational technology, yet Johnson et al.'s (2023) systematic review of K-12 online teaching in the United

States reports a dearth of research focusing on parental support. Disagreements like this are not an obstacle to adoption; they are the information leaders need before adopting. Without an appropriate forum, the decision is displaced rather than avoided. Procurement timelines, vendor claims, and default settings then shape practice in place of meaningful deliberation.

Review of the Literature

A growing body of literature suggests that current frameworks are insufficient, but the studies differ in scope and in evidentiary strength. Lodhi and Roehrig (2026), in a critical conceptual synthesis examining human-centered AI in K-12 STEM education, identify algorithmic bias as a dominant ethical concern and recommend compulsory bias checks and equitable resourcing that prioritizes ethical pedagogy. Song et al.'s (2024) systematic literature review of inclusive AI learning design proposes a framework grounded in equity to guide instructors and learning designers. Both identify the absence of definitive frameworks for domain-specific AI integration, although the former focuses on STEM education and the latter examines diverse disciplines. Their evidentiary bases differ: Song et al. analyzed only 10 empirical studies spanning a decade (2013 to 2024), and the rapidly evolving nature of AI systems may limit the currency of their aggregate findings, whereas Lodhi and Roehrig draw on a wider literature. Ma et al. (2025) reviewed 68 peer-reviewed studies and identified a competency-based AI literacy guide that frames ethics as a reformative learning paradigm. However, the studies represent regions with differing demographics and technological resources, limiting the direct applicability of their conclusions to any single educational system. Despite these differences, all three emphasize intentionally designed frameworks and professional development that prepares educators to recognize algorithmic bias.

The literature on equitable design and on governance reports parallel gaps. Viano and Darling-Aduana's (2026) review of CRP found limited attention to real-time assessment and AI's expanding role. Similarly, Zhang et al. (2024) reported that although characteristics such as gender and ethnicity may influence engagement with PAs, the literature lacks sufficient depth and remains preliminary. On governance, Kim et al. (2026) argue that responsible AI in K-12 education depends on effective leadership, while Riegel et al. (2025), in a mixed-methods, multistate study, identify a lack of clear guidelines to facilitate deployment. The two differ in reach: the first sampled a single US state and the second five states, supporting broader but still cautious claims of generalizability. Riegel et al.'s reliance on self-reported Likert-scale responses introduces the possibility of response bias. Borasi et al. (2026), interviewing 36 education leaders across 23 districts in Western New York, found that leaders agreed on keeping humans in the loop and adopting AI as an assistant rather than as a replacement for work processes.

Collectively, the literature establishes professional challenges rather than a set of solutions. School leaders must develop transparent governance policy in the absence of definitive frameworks. These reviews identify several priorities: preventing biased recommendations despite limited staff AI literacy; determining which academic decisions require human oversight; ensuring equitable access for families whose participation remains understudied; and facilitating dialogue among stakeholders whose views differ substantially (Han et al., 2024). The literature is consistent about what online K-12 leaders are responsible for and largely silent about how they should discharge that responsibility, which it identifies as the most significant challenge.

Conclusion

AI is reshaping educational ecosystems, and its responsible use for personalized learning requires alignment across the domains examined in this review. Those domains are not separate

responsibilities. Algorithmic bias is an ethical failure whose consequences fall unequally on diverse learners (Akgun & Greenhow, 2022; Lodhi & Roehrig, 2026), and whether it is identified depends on stakeholders having an appropriate forum in which to raise the concern. Equitable personalization requires accountability for system generated recommendations and meaningful dialogue about community standards. Civil discourse without accountability amounts to consultation without change. Successful AI implementation depends on clear policies, consideration of stakeholder expectations, and adaptable, pedagogically sound tools. There is a dearth of literature exploring K-12 AI literacy and its place in educational leadership. This review recommends developing innovative AI literacy frameworks for school leaders, extending the competency-based approach Ma et al. (2025) propose for K-12 AI ethics education, to support the successful integration of AI into curricula.

References

- Akgun, S., & Greenhow, C. (2022). Artificial intelligence in education: Addressing ethical challenges in K-12 settings. *AI and Ethics*, 2(3), 431–440.
<https://doi.org/10.1007/s43681-021-00096-7>
- Borasi, R., Vaughan-Brogan, P., Miller, D., Mason, S., Han, Y. J., & DeAngelis, K. (2026). K-12 leaders' perspectives on the implications of artificial intelligence for the work of K-12 educators. *Discover Education*, 5(1), Article 223. <https://doi.org/10.1007/s44217-026-01209-2>
- Chan, W. S., Kim, J., Yu, S., & Detrick, R. K. (2026). Learning design to advance human-AI collaboration in K-12 education. In R. Zheng (Ed.), *The intersection of AI and student development in learning* (pp. 1–32). IGI Global Scientific Publishing.
<https://doi.org/10.4018/979-8-3373-2927-7.ch001>
- Han, A., Zhou, X., Cai, Z., Han, S., Ko, R., Corrigan, S., & Peppler, K. A. (2024). Teachers, parents, and students' perspectives on integrating generative AI into elementary literacy education. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* (pp. 1–17). Association for Computing Machinery.
<https://doi.org/10.1145/3613904.3642438>
- Johnson, C. C., Walton, J. B., Strickler, L., & Elliott, J. B. (2023). Online teaching in K-12 education in the United States: A systematic review. *Review of Educational Research*, 93(3), 353–411. <https://doi.org/10.3102/00346543221105550>
- Kim, J., Cheah, Y. H., & Wargo, E. (2026). Transforming K-12 education with AI: Educational leaders' perspectives and policy implications. *Journal of School Leadership*, 36(3), 396–415. <https://doi.org/10.1177/10526846251413036>

- Lodhi, S., & Roehrig, G. (2026). Beyond the algorithm: A critical synthesis for human-centered AI in K-12 STEM education. *AI and Ethics*, 6(2), Article 167.
<https://doi.org/10.1007/s43681-026-00994-8>
- Ma, M., Ng, D. T. K., Liu, Z., & Wong, G. K. W. (2025). Fostering responsible AI literacy: A systematic review of K-12 AI ethics education. *Computers and Education: Artificial Intelligence*, 8, Article 100422. <https://doi.org/10.1016/j.caeai.2025.100422>
- Riegel, C., Ford, A. Y., Brinkmann, J. L., Christian, G., Weinstein, D., & Cash, C. S. (2025). Exploring AI in education: A multi-state study on K12 teachers' and administrators' knowledge, use, and perceptions of artificial intelligence. *Issues and Trends in Learning Technologies*, 13(1), 3–34. <https://doi.org/10.2458/itlt.7512>
- Song, Y., Weisberg, L. R., Zhang, S., Tian, X., Boyer, K. E., & Israel, M. (2024). A framework for inclusive AI learning design for diverse learners. *Computers and Education: Artificial Intelligence*, 6, Article 100212. <https://doi.org/10.1016/j.caeai.2024.100212>
- Viano, S., & Darling-Aduana, J. (2026). Culturally relevant pedagogy in K-12 online learning: A systematic review. *Review of Educational Research*, 96(3), 724–760.
<https://doi.org/10.3102/00346543251320355>
- Wang, J., Xiao, R., Hou, X., Li, H., Tseng, Y. J., Stamper, J., & Koedinger, K. (2025). LLMs to support K-12 teachers in culturally relevant pedagogy: An AI literacy example. In A. I. Cristea, E. Walker, Y. Lu, O. C. Santos, & S. Isotani (Eds.), *Artificial intelligence in education: Posters and late breaking results, workshops and tutorials, industry and innovation tracks, practitioners, doctoral consortium, blue sky, and WideAIED* (pp. 152–160). Springer. https://doi.org/10.1007/978-3-031-99264-3_19

Zhang, S., Jaldi, C. D., Schroeder, N. L., López, A. A., Gladstone, J. R., & Heidig, S. (2024).

Pedagogical agent design for K-12 education: A systematic review. *Computers & Education*, 223, Article 105165. <https://doi.org/10.1016/j.compedu.2024.105165>
[/j.compedu.2024.105165](https://doi.org/10.1016/j.compedu.2024.105165)