

# AI in High School Education: Trends, Challenges, and Opportunities

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## Introduction

Artificial intelligence (AI) is reshaping how teachers and students engage with learning and instructional processes. As AI technologies evolve, they hold the promise of enhancing educational practices through personalization and efficiency yet simultaneously raise challenges around ethics, academic integrity, and equitable access, prompting questions about whether AI is ultimately beneficial or detrimental to student learning and development.

This report examines AI's current role in high school education, providing an overview of institutional responses, adoption patterns and perspectives among teachers and students, impacts on learning outcomes, concerns about academic integrity, and prevailing ethical concerns. Understanding these dynamics is increasingly critical for effective implementation as AI adoption accelerates in educational settings. By identifying key trends and gaps, the goal of this report is to inform educators, policymakers, and other stakeholders on the state of AI in high school education.

## Institutional Responses

### Key Findings

- *Policy Clarity Issues:* 31% of schools have AI policies, but 60% of educators say these policies aren't clear to them or their students ("School Pulse Panel" 2024; Langreo 2025)
- *Training Discrepancies:* 67% of schools report offering AI training, yet 68% of teachers report not engaging with any institution-provided training ("School Pulse Panel" 2024; *Teaching for Tomorrow* 2025, 18)

- *Ethical Education Gaps:* Only 14% of schools teach students about ethical/appropriate AI use, with some high schools' AI focus representing exceptions (“School Pulse Panel” 2024)

### **Challenges in Policy Development**

The rapid rise of AI makes it difficult for educational institutions to develop coherent responses, with significant gaps existing between policy creation and effective implementation. In December 2024, the School Pulse Panel, a monthly sample survey of public K-12 schools in the United States conducted by the National Center for Education Statistics, found that 31% of schools had policies on student AI use (“School Pulse Panel” 2024). However, during that same timeframe, 60% of educators reported that their districts’ AI policy was not clear to them or their students, suggesting a gap between policy existence and educator understanding (Langreo 2025). Additionally, the ever-changing landscape and complexity of AI capabilities make it challenging for schools and school districts to formulate, train, and implement relevant and timely AI policies.

### **Implementation Challenges in Educator Training**

Despite institutional efforts to provide AI teacher training, current programs demonstrate significant implementation challenges.

- *Training Availability vs. Participation:* While 67% of public K-12 schools in the US report having AI training for some or all teachers in the 2024-25 school year, a survey of over 2,000 K-12 teachers found that 68% reported not engaging with any institution-provided training that same school year (“School Pulse Panel” 2024; *Teaching for Tomorrow* 2025, 18). This disconnect could indicate quality or accessibility issues with current programs. It suggests that provided training may not meet teachers’ need for support around professional development, technical training, and assistance with AI classroom policies (*AI in Education* 2024). Additionally, teachers may be overwhelmed with competing priorities, making it challenging to participate in available training sessions.
- *External Initiatives:* To address training gaps, external stakeholders have stepped in, with the American Federation of Teachers partnering with Microsoft, Anthropic, and OpenAI to launch a \$23 million National Academy for AI Instruction, aiming to train 400,000 educators by 2030 (“AFT to Launch National Academy” 2025). Through workshops, online courses, hands-on training sessions, and ongoing support and resources, the National Academy for AI Instruction seeks to equip educators with the skills to effectively and ethically integrate AI into their work. While this effort represents a significant investment in educator training, the involvement of major tech companies that develop AI tools raises important questions about their influence on educational content and priorities. As Evan Gorelick writes in *The New York Times*, “It’s an old playbook: Get kids hooked, and you’ve got future customers,” highlighting the potential for these companies to shape educational agendas to align with their commercial interests (Gorelick 2025). This underscores the need for balanced input from educational professionals to ensure pedagogical goals and equity remain at the forefront.

### **Student Education**

Students have been provided with very little AI training. In late 2024, only 14% of public K-12 schools surveyed in the US reported that students were taught about ethical/appropriate AI use (“School Pulse Panel” 2024). However, there are some high schools that have embraced comprehensive AI education. For example, Gwinnett County's Seckinger High School in Georgia opened in 2022 as “the nation’s first Artificial Intelligence (AI) themed educational institution” (“Seckinger High School”). Additionally, North Star Academy Washington Park High School in Newark, New Jersey, partnered with Stanford Digital Education to help students understand AI and its impacts (“Stanford Digital Education” 2025). These schools, however, represent individual institutional responses rather than widespread adoption of AI education for students. Therefore, there remains a significant gap between pioneering institutions that have embraced comprehensive AI education, and most other schools that offer minimal AI instruction, if any.

## **Conclusion**

The journey toward effective AI integration in education is complex and fraught with challenges in policy formulation, implementation, and training. To fully harness AI’s potential while limiting its risks, coherent policies and robust training programs need to be widespread and accessible to both educators and students. However, despite the lack of adequate guidance, many students and teachers are utilizing AI tools.

## **Teacher Adoption of AI Tools**

### **Key Findings**

- *Increased Adoption:* Teacher adoption grew from 46% in the 2023-24 school year to 60% in 2024-25, suggesting rapid normalization (Laird et al. 2025, 19; *Teaching for Tomorrow* 2025, 4)
- *Variety of Uses:* AI is utilized for tasks from prep work to tailoring content to assisting with language learning (Laird et al. 2025, 19; Diliberti et al. 2024, 6; Hadi Mogavi et al. 2024, 8)

### **Rising Adoption Rates**

High school teachers are adopting AI tools across multiple aspects of their work from creating materials for classes to drafting emails to parents. A poll by the Center for Democracy and Technology of 1,006 high school teachers found that 46% of teachers reported using generative AI for schoolwork in the 2023-24 school year (Laird et al. 2025, 19). This number increased significantly in the 2024-25 school year, with 60% of K-12 teachers reporting using AI tools for work (*Teaching for Tomorrow* 2025, 4). This rapid growth could reflect increased general knowledge of AI and its potential uses within education.

### **Expansion of Use**

High school teachers are using AI for a variety of purposes, with common applications including:

- *Grading and Instruction Customization:* Of the early adopters, 21% used AI to grade tests in the 2023-24 school year, raising questions about if and how teachers might modify assessments to align with the capabilities of these technologies, potentially

influencing assignment design and evaluation criteria (Laird et al. 2025, 19). Many also report using AI to customize instruction and generate teaching materials (Diliberti et al. 2024, 6).

- *Detection Tool Use*: A national survey of middle and high school teachers found that 86% of teachers report using AI detection tools regularly, a concerningly high percentage given their current inaccuracy and inconsistency (Dwyer and Laird 2024, 13).
- *Learning Assistance*: Large language models like ChatGPT are used to assist with language learning skills, support home learning, and improve accessibility (Hadi Mogavi et al. 2024, 8).
- *Primary Applications in 2024-25*: Preparation work remained the most common AI use, followed by creating worksheets, personalizing materials, performing administrative tasks, and administering assessments (*Teaching for Tomorrow*, 2025, p. 5).

## Conclusion

AI is increasingly being used by high school teachers in various aspects of their work. However, teacher adoption comes with both excitement about AI's educational potential and concerns about its impact on student learning and ethics, themes that emerge throughout teachers' experiences with these technologies.

## Educator Perspectives

### Key Findings

- *AI Integration*: 54% of teachers are likely to integrate AI in their teaching, but many remain ambivalent or negatively perceive its impact (Kaplan-Rakowski et al. 2023, 327; Lin 2024)
- *Concerns*: Teachers worry about ethics of AI, logistics, and student AI use (*AI in Education* 2024; Hadi Mogavi et al. 2024, 11-13)
- *Preparedness Challenges*: Educators often feel unprepared for AI integration in classrooms (Dunnigan et al. 2023, 879-880; Diliberti et al. 2025)

### Complex Views on AI

High school educators have complex and often conflicting views about AI's role in education, recognizing its potential while expressing concerns about its implementation and impact. While a 2023 survey of 147 teachers found that 54% reported being likely or very likely to integrate AI into their teaching, another survey revealed that only 34% of high school teachers think AI tools have equal benefits and harms in K-12 education, while 35% believe these tools cause more harm than good (Kaplan-Rakowski et al. 2023, 327; Lin 2024).

### Concerns and Challenges

Teacher concerns center on student development and implementation challenges such as:

- *Ethical and Privacy Issues*: A survey of over 1,000 educators in Michigan found that concerns tended to focus on ethical use, including inappropriate student use and privacy (*AI in Education* 2024).

- *Training and Availability:* Teachers worry about logistics such as lack of adequate training for educators and tool availability (*AI in Education* 2024).
- *Student Engagement:* There is the fear that heavy reliance on AI tools could increase student procrastination, decrease their sense of autonomy and competence, and hinder development of critical thinking and problem-solving skills (Hadi Mogavi et al. 2024, 11-13).

### **Recognition of Potential Benefits**

Despite these concerns, high school teachers recognize AI's potential benefits. Most teachers who used AI for their work in the 2024-25 school year reported that these tools saved time and improved the quality of their work (*Teaching for Tomorrow* 2025, 7-8). Additionally, teachers who used AI at least once in the 2024-25 school year are more than twice as likely to favor AI use in K-12 schools compared to those who have not (*Teaching for Tomorrow* 2025, 12).

### **Preparedness and Implementation**

While there is interest in AI integration, teachers and school leaders feel unprepared for implementation. In 2023, educational leaders reported confusion about what AI means for education, and a desire for more guidance from industry experts to help integrate these tools into the classroom (Dunnigan et al. 2023, 879-880). This early desire, however, raises concerns that technological capabilities, rather than educational goals, may drive integration strategies. Interviews with school leaders in 2024-25 further suggest that some teachers remain confused and fearful of AI tools, with district leaders hoping AI training will help (Diliberti et al. 2025).

### **Conclusion**

Understanding educator perspectives provides crucial context for examining how AI is actually being used in classrooms and its impact on student learning. While addressing concerns through continued training may help pave the way for effective educator use, it is equally important to explore how students are adopting AI technologies and integrating them into their learning experiences.

## **Student Adoption of AI Tools**

### **Key Findings**

- *Widespread Use:* 70% of teens have used some form of generative AI, with 57% using it specifically for homework help (*Teen and Young Adult Perspectives* 2024, 4)
- *Common Applications:* High schoolers are primarily using AI for idea generation, getting information, and explaining concepts (*Teen and Young Adult Perspectives* 2024, 7; Lee et al. 2024, 8)

### **Student Adoption**

Teachers are using AI, and so are students. A 2024 national survey of over 1,000 teens in the US found that 70% of teens have used at least one type of generative AI, with 56% having used search engines with AI-generated results and 51% having used chatbots or text generators (*Teen and Young Adult Perspectives* 2024, 4).

## Adoption Demographics

Generative AI use among young people varies by race/ethnicity. Namely, among those who are using generative AI, Black and Latinx young people are twice as likely, compared to white young people, to report using these tools at least weekly (*Teen and Young Adult Perspectives* 2024, 6). However, among those who report not using generative AI, Black and Latinx young people are also more likely than their white peers to not know about the existence of AI tools, raising questions about access and equity (*Teen and Young Adult Perspectives* 2024, 17). This pattern reflects broader trends in internet usage by race and ethnicity, where Black and Hispanic teens are online more frequently than white teens despite having lower rates of home broadband access (Vogels et al. 2022; Atske and Perrin 2021).

The dual dynamic around generative AI use and knowledge suggests that while Black and Latinx young people are actively leveraging available technology, there remains a gap in comprehensive exposure to AI resources, pointing to disparities in how digital literacy and technology education are distributed.

## Student Use

Beyond understanding who is using AI, it is important to examine *how* students are using these tools. Homework help is the most prevalent use, with over half (57%) of teens and young adults surveyed in 2024 reporting using this AI use (*Teen and Young Adult Perspectives* 2024, 4). In academic contexts, students are using AI in the following specific ways:

- *Brainstorming and Idea Generation*: Students commonly use AI to brainstorm and generate ideas (Lee et al. 2024, 8; *Teen and Young Adult Perspectives* 2024, 7).
- *Information Retrieval*: AI serves as a tool to access information (*Teen and Young Adult Perspectives* 2024, 7).
- *Concept Explanation*: Explaining new concepts using AI (Lee et al. 2024, 8).

## Conclusion

While student engagement with AI is broad, the frequency and intensity of use varies among demographic groups, revealing both opportunities for enhanced educational support and challenges related to access and equity. Additionally, although usage patterns suggest that students are primarily using AI as an aid rather than a replacement for their own thinking, there is the possibility that respondents may underreport their reliance on AI tools for tasks such as writing essays.

## Student Perspectives

### Key Findings

- *Mixed Perceptions*: 41% of young people believe AI will have both positive and negative impacts on their lives (*Teen and Young Adult Perspectives* 2024, 19)
- *Integration Preferences*: Students favor AI integration into education but oppose using AI to complete partial or full assignments and have reservations about teacher use (Verma and Ciesla 2024, 3; Lee et al. 2024, 7)

- *Ethical Concerns*: “AI guilt” and concerns about fairness impact how students approach AI use (Chan 2024; Famaye et al. 2024, 190; *Voices of Gen Z* 2025, 7)

### **Nuanced Perspectives**

High school students bring complex perspectives to AI’s role in education, balancing enthusiasm for its potential with realistic concerns about its risks. A national survey of over 1,200 teens and young adults found that 41% believe AI will have both positive and negative impacts on their lives in the next decade (*Teen and Young Adult Perspectives* 2024, 19). Those expecting positive impacts cite increased access to information and enhanced creativity, while those expecting negative impacts worry primarily about job displacement and AI dominance (10-11, 23).

### **Support for Integration**

Despite these concerns, students generally support thoughtful AI integration in schools rather than outright bans. A Stanford discussion with 71 high school students found students were in favor of AI use by both teachers and students, opposing policies that limited or prohibited AI use in classrooms (Verma and Ciesla 2024, 3). This perspective appears widespread: more than half of students surveyed at both private and public high schools believed certain uses of AI, such as generating ideas, should be allowed (Lee et al. 2024, 7). However, many believe AI should not be used to complete or edit a portion or entirety of an academic assignment (Lee et al. 2024, 7). This suggests that certain AI uses are considered “more serious” than others, although further research is needed to better understand students’ perspectives and motivations. Students also have reservations about their teachers using AI, with 45% of students opposing the use of AI detection tools to verify the authenticity of student work and 41% opposing teachers using AI for grading or creating teaching materials (Verma and Ciesla 2024, 3).

### **Ethical and Practical Concerns**

While there is support for AI in education, students have both ethical and practical concerns about its implementation.

- *“AI Guilt”*: Perceived laziness, inauthenticity, fear of judgement, concerns about identity, or ability to complete academic tasks (self-efficacy) that can greatly impact students’ willingness to use AI for academic purposes (Chan 2024).
- *Unfairness*: Students express concerns about unfairness if some peers use AI to complete their work while others do not (Famaye et al. 2024, 190).
- *Critical Thinking*: Young people aged 13-28 are concerned about AI’s impact on their critical thinking, with about half of those surveyed believing AI will harm their ability to think critically about information (*Voices of Gen Z* 2025, 7).

### **Conclusion**

These perspectives suggest that many students are ready for nuanced conversations about AI ethics and appropriate use, viewing these tools as potentially valuable while understanding their limitations and risks. However, further research is needed to understand long-term use patterns and their impact on student learning.

## Impact of AI on Learning Outcomes

### Key Findings

- *Potential Benefits:* Personalized feedback, adaptive learning strategies, and enhanced writing/problem-solving skills
- *Mixed Evidence:* Contradictory results exist on whether AI enhances critical thinking, learning engagement, and student motivation
- *Major Concerns:* AI reliability, academic integrity challenges, and potential impacts on long-term cognitive development
- *Research Gaps:* There are a lack of studies on long-term effects and optimal implementation strategies

### Potential Benefits

Research on how AI tools affect student learning presents a complex and sometimes landscape. Common benefits cited by scholars include homework and study assistance through personalized feedback, explanations, guidance, adapting to student needs with flexible learning strategies, and enhancing skills like writing and problem-solving abilities (Labadze et al. 2023, 10).

### Contradictory Findings

While it is clear that AI tools have a significant impact on education, there are contradictory findings regarding how they impact critical thinking, learning engagement, and motivation (Labadze et al. 2023, 6). For example, Deng and Yu (2023) found that AI chatbots did not increase learning engagement compared to traditional learning methods while Lademann et al. (2025) found that sixth graders' interest increased when using AI-generated explanations as supplemental material to traditional textbook material. These mixed results suggest that context such as age group, subject matter, or implementation may be crucial factors.

### Broader Concerns

Scholars and educators have raised several concerns about AI's educational impact, including:

- *AI Reliability:* Concerns include AI's accuracy and reliability as it can confidently present incorrect information (Albadarin et al. 2024, 15-16).
- *Academic Integrity and Student Evaluation:* AI tools have the potential to encourage academic dishonesty, making it difficult to evaluate student performance (Albadarin et al. 2024, 15-16).
- *Cognitive and Socio-Emotional Impact:* There are questions about AI's long-term impact on cognitive development and critical thinking skills (Albadarin et al. 2024, 15-16). AI tools may also fall short on fostering student's socio-emotional competencies and personal development (Chan and Tsi 2024, 10).

### The Need for Further Study

More than anything, what emerges from current research is the need for more comprehensive studies. Significant gaps remain regarding the long-term sustainability and persistence of AI

benefits in education, the impact of AI based on student characteristics such as prior knowledge, age, et cetera, and pedagogical strategies employed by AI tools in educational settings (Labadze et al. 2023, 7). However, conducting such research presents inherent challenges given AI's rapid evolution and frequent updates.

## **Conclusion**

To maximize AI's potential in education, addressing existing research gaps and understanding varied contextual impacts are crucial. Comprehensive studies will help educators harness AI effectively, ensuring it complements traditional teaching methods while enhancing educational outcomes. However, realizing this potential requires addressing immediate practical concerns for educators, particularly around academic integrity.

## **Academic Integrity**

### **Key Findings**

- *Rising Concerns*: Teachers worry AI will cause more cheating, with 58% expecting negative impact in next three years (*Latest Insights into Academic Integrity* 2024, 12)
- *Use of Detection Tools*: Many teachers use AI detection tools regularly despite lack of evidence for increased cheating (Dwyer and Laird 2024, 13; Lee et al. 2024, 7)
- *Inconsistencies and Biases*: Detection tools are inconsistent and disproportionately flag non-native English speakers as cheating (Malik and Amjad 2025; Chanka 2024, 123; W. Liang et al. 2023)

### **Concerns about Cheating**

The rise of AI has led to concerns about potential increases in student cheating. Although almost 60% of teachers believed AI had no impact on cheating in 2023, 58% believe it will negatively impact cheating in the next three years, demonstrating the worry that AI will cause more cheating (*Latest Insights into Academic Integrity* 2024, 12). However, a study based on confidential or anonymous student surveys up until 2023 found that cheating did not increase after ChatGPT was released in 2022 (Lee et al. 2024, 7). While this may change as AI continues to become more widely adopted, there has been limited evidence that AI is causing new cheating behaviors in high school students.

### **Use of Detection Tools**

Despite this finding, many teachers remain worried that students are cheating using AI tools. This has led to the use of AI detection software such as Turnitin and ZeroGPT, with 68% of teachers using AI content detection tools regularly in the 2023-24 school year despite these tools being ineffective and unreliable (Dwyer and Laird 2024, 13; Chaka 2024, 123).

### **Limitations and Bias in Detection Tools**

Current AI detection tools are ineffective for several reasons:

- *Inconsistency*: These tools often produce vastly different scores on repeated analysis of the same text, compromising their reliability (Malik and Amjad 2025).

- *Bias Against Non-native Speakers:* A Stanford study found that AI detection tools misclassify texts written by non-native English speakers significantly more frequently than text by native English speakers (W. Liang et al. 2023). As a result, AI detection tools unfairly penalize and discipline students that are non-native English speakers.
- *AI Humanizer Tools:* With teacher adoption of AI detection tools, there is a growing student market for tools that “humanize” text generated by AI to bypass AI detection tools by, for example, adding nonsensical phrases and varying sentence structure (Masrour et al. 2025).

## Conclusion

There is a troubling disconnect between educators' perceptions and empirical evidence regarding AI's impact on academic integrity. While teachers' concerns about future cheating are understandable given AI's rapid advancement, the widespread adoption of unreliable and biased detection tools represents a misguided response that may cause more harm than the problem it aims to solve. These unintended consequences exemplify broader ethical concerns that arise with AI integration into educational contexts.

## Ethical Concerns

### Key Findings

- *Three Primary Dimensions Concerns:* Technology risks, education risks, and society risks (Zhu et al. 2025)
- *Technology Risks:* Include privacy and security, bias, reliability, transparency (Karan and Angadi 2023; Baker and Hawn 2021; Burleigh et al. 2025)
- *Education Risks:* Include homogenized development and teaching, curricular control, and weakened educational relationships (Holmes et al. 2023, 109; Zhu et al. 2025, 5; Tundrea 2020, 5-6)
- *Society Risks:* Include increased digital divide and lack of accountability (Lutz 2019; Zhu et al. 2025, 7-8)

## Analyzing Ethical Dimensions

AI integration in schools raises significant ethical concerns that educators and policymakers are only beginning to address. A comprehensive review of 75 studies from 2019-2024 found three primary dimensions of ethical concerns of AI in education: technology risks, education risks, and society risks (Zhu et al. 2025).

## Technology Risks

- *Privacy and Autonomy:* Analysis of 71 articles identified Privacy and Autonomy Risks as a major risk area, with concerns about surveillance and the extensive collection of student and teacher data leading to increased student anxiety, decreased autonomy, and security threats (Karan and Angadi 2023, 70-71).
- *Bias:* AI bias affects students across multiple dimensions such as race/ethnicity, gender, nationality, socioeconomic status, disability, and military-connected status (Baker and Hawn 2021). This can lead to, for example, AI grading tools reflecting existing human

grading biases, with Black students receiving consistently lower scores than Asian students (Burleigh et al. 2025).

- *Reliability and Transparency:* AI can disseminate biased or false information that could mislead and hinder students' learning processes (Labadze et al. 2023, 11). Further, the inner workings of AI models are not usually transparent, making it difficult for students, parents, and teachers to understand how these systems make decisions about educational content, assessments, or recommendations (Gillani et al. 2023, 105).

### **Education Risks:**

- *Homogenization:* While AI promises personalized teaching, tools pushing similar views of resources may lead to homogenization rather than the development of individual potential (Holmes et al. 2023, 109).
- *Curricular Control:* Questions arise about who determines educational content and whether AI companies are making curricular decisions that should remain with educators. This is particularly important as curricular decisions drive instructional decisions (how material is introduced, teaching methods, etc.) and assessment decisions (J. Liang et al. 2025, 2).
- *Teacher Autonomy:* Teachers' autonomy may be limited due to the possibility of AI monitoring of classrooms and algorithmic control within educational settings (Zhu et al. 2025, 5).
- *Student-Teacher Relationships:* Teachers who increasingly rely on AI to make decisions may become less critical and morally engaged, potentially alienating student-teacher relationships (Tundrea 2020, 5-6).

### **Society Risks**

- *Inequity and Exacerbation of the Digital Divide:* The divide between those with AI access and knowledge versus those without could widen educational inequalities across three levels: access to AI tools, education on effective AI utilization, and ability to leverage AI skills to benefit themselves in, for example, future employment (Lutz 2019).
- *Accountability:* Due to the opaque nature of AI systems, potentially unclear policies, and lack of awareness of AI's risks, there are often insufficient legal and professional accountability mechanisms for these systems (Zhu et al. 2025, 7-8).

### **Conclusion**

These ethical challenges require attention from educators, policymakers, and technology developers to ensure AI enhances rather than undermines educational equity and quality.

### **Synthesis and Implications**

This examination of AI's integration into high school education reveals a landscape characterized by rapid adoption coupled with persistent implementation challenges. The findings illuminate several critical themes, highlighting both the transformative potential of AI and the inherent complexities present in educational settings.

### **Implementation Gap**

There is a consistent disconnect between policy creation and effective execution. Many schools have established AI policies, yet educators often find these policies unclear. Similarly, while schools report offering AI training, a significant portion of teachers have not engaged with the available resources. This pattern suggests that institutional capacity for meaningful AI integration remains underdeveloped, despite growing recognition of its importance.

### **Widespread Adoption Without Guidance**

AI tools are being rapidly adopted by both educators and students. However, the lack of adequate training and ethical education creates a significant gap between usage and understanding, leaving many without guidance on appropriate applications.

### **Stakeholder Ambivalence**

Despite high adoption rates, stakeholders express mixed feelings about AI's impact. Many teachers plan to integrate AI, yet only a portion view its benefits and harms as balanced. Students also support thoughtful AI integration while expressing concerns about ethical issues. Scholarly research has shown mixed results on whether AI enhances critical thinking, learning engagement, and student motivation. This ambivalence indicates a need for further research and clearer frameworks around AI's educational role.

### **Ethical Concerns**

AI in education presents ethical challenges, including issues of privacy, bias, and fairness. Key concerns include data privacy and surveillance, AI bias affecting diverse student groups, and the potential for homogenized learning. Disparities in access and awareness are evident, with Black and Latinx students using AI more often but being more likely to be unaware of these tools. Additionally, AI detection tools unfairly impact non-native English speakers, potentially worsening educational inequities. Addressing these issues before implementation is crucial to ensure AI enhances educational equity and quality.

### **Moving Forward**

The findings indicate that AI integration in high school education is advancing rapidly but unevenly. Success requires addressing the fundamental gaps between policy and practice, ensuring equitable access to both AI tools and AI literacy education, and developing comprehensive frameworks for ethical implementation.

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