Exploring AI in Education: A Multi-State Study on K12 Teachers' and Administrators' Knowledge, Use, and Perceptions of Artificial Intelligence

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Abstract

The rapid expansion of Artificial Intelligence (AI) is affecting many industries and organizations, including educational institutions of all levels. The purpose of this mixed methods multi-state study was to investigate K12 teachers' and administrators' knowledge of AI, use of AI, perceptions of AI, and concerns around this emerging technology. The quantitative portion of the study presented in this article utilized a 23 question Likert scale survey to better understand the differences in how AI is perceived and utilized by teachers and administrators within the educational system. The results showed both educators and administrators have a general knowledge of AI, educators indicated a minimal use of AI and administrators indicated a moderate use of AI. Although both educators' and administrators' responses showed a positive perception of AI, the majority in both groups also expressed concerns regarding implementation in the school setting and policy development to guide usage in schools. Implications of this study focus on leveraging the insights of both educators and administrators, to ensure that AI is effectively and ethically integrated into educational practices, ultimately enhancing teaching and learning processes. By understanding the views and addressing the concerns, we can facilitate the development of strategies that maximize the benefits of AI while mitigating any potential risks, ultimately fostering a more innovative and responsive educational environment.

Artificial intelligence (AI) has existed for decades but gained widespread attention in 2022 with the release of generative models (e.g., ChatGPT). The emergence of this technology that can create human-like intelligence from machines sparked both excitement and concern (Kennedy et al., 2023; Riemer & Peter, 2024). According to Fullen et al. (2023), "there is a lack of research, guidelines, policies, and regulations related to the specific ethical issues raised by the application of GenAI to education" (p. 340). The purpose of this multi-state study was to examine K12 teachers' and administrators' knowledge, usage, and perceptions of AI. The goals included increasing understanding about teachers' and educational leaders' knowledge about AI, how they are using it (if at all), exploring their overall perceptions of AI, and identifying their concerns. This research will illuminate the current state of AI familiarity for teachers and school leaders and may assist individuals who build training programs for educators to

incorporate the necessary skills and knowledge, to address the most critical areas for effective AI utilization in academic settings.

Knowledge of AI

Knowledge of AI can provide a transformative resource to support administrators, teachers, and students. The Center for Innovation, Design, and Digital Learning (CIDDL), found AI "has the potential to revolutionize teaching and learning through personalized education, administrative efficiency, and innovation" (CIDDL, 2024, p. 7). According to Celik et al. (2022), educators should be focused on the pedagogical transformations available such as adaptive learning systems, artificial tutors, and advanced analytics. However, educators have expressed hesitancy in adopting AI for a variety of reasons, including the perceived hurdles and lack of true understanding about machine learning (Woodruff et al., 2023). Central to this concept is understanding the terminology associated with AI and a call for higher education faculty involved in educator training to consider instructional implications (Walter, 2024).
The National Technology Plans (2017, 2024) highlighted disparities in instructional activities between students with access to technology at home and those without. Many AI-driven tools depend on both service access and stable internet connectivity to function effectively, which is a consideration for students' ability to engage with AI-based learning resources outside of school. The technology plans called for equipping educators with strategies to integrate AI, including creating frameworks for student competencies, fostering systems that integrate technology into learning, developing guidelines for digital tools and emerging technologies, and providing professional learning opportunities for educators. Additionally, they stressed the importance of building partnerships to expand hands-on and work-based learning opportunities and ensuring feedback mechanisms empower students to actively shape their learning experiences.

Policy development and teacher training are essential to provide knowledge that supports the application of AI in classroom settings (U. S. Department of Education, 2024a). School leaders are required to think through policy related to integrating AI, budgets for technology innovations and training, Federal Educational Rights to Privacy Act (FERPA) compliance, policy development, and student success (CIDDL, 2024). Tucker (2024) encouraged school leaders to expand their knowledge of AI and implications for practice, through attention to guiding ideas such as how schools can use AI to support existing school initiatives, prepare students with the skills to thrive in an AI infused world, and encourage a culture of experimentation, as well as how professional learning can focus on AI support for

educators. School leaders who have implemented AI effectively have used consistent strategies to expand knowledge and access, such as providing a safe space for exploring the use of AI, scheduling professional learning through a multi-year lens, celebrating successful examples, crafting time for conversations with educators, and creating the right conditions for success (U.S. Department of Education, 2024b).

Use of AI

After acquiring increased understanding of the current and projected knowledge of AI, it is also critical to understand the current use. Although there is some hesitancy, the use of AI is expected to increase in many facets of education, including K12 public schools (Fullan et al., 2023). A key component to responsible, respectful, and safe behavior with AI use is clear policy and professional learning for administrators and teachers (KDOE, 2024; Tucker, 2024). To that end, the Southern Regional Education Board (SREB) (2024) Commission on AI in Education, convened stakeholders from 16 states to explore AI's implications for PK-12 education, emphasizing workforce readiness and industry collaboration. Emerging ideas included integration of AI through all content disciplines and intentional collaboration with industry partners to ensure students workforce readiness. SREB (2024) recognized that clear AI education policy is central to appropriate use and has provided guidance, policy, and standards to support the initial implementation.

The Kentucky Department of Education (KDOE) (2024) published an AI guidance brief for school administrators, emphasizing an education-first approach, equity, accountability, digital citizenship, privacy protections, and ethical considerations. The guide identified principles to maximize the potential benefits of AI through appropriate use. Similarly, the Michigan and Arkansas Departments of Education recognized the value of forming a collaborative partnership with the Virtual Learning Leadership Alliance and published a guide and framework for school districts (Virtual Arkansas, 2024). The framework identified a strategic process for investigating, implementing, and innovating AI through a focused approach with administrators and vision for AI. This approach encourages collaboration, professional learning, and action research to explore AI's potential for instruction and student engagement.

Perceptions of AI

Knowledge and use of AI have the potential to expand efficiency and inclusiveness in educational settings; however, it is critical to understand the current perceptions of AI that

exist in the field. According to Martin et al. (2024), "AI's significance in guiding daily instructional practice, curriculum design and leadership and policy are important considerations for K-12 leaders, educators, and researchers" (p. 1). According to Celik et al. (2022), AI provides teachers with enhanced tools for lesson planning, innovative implementation strategies, and differentiated assessment tools, including automated programs for scoring students' work. Likewise, school leaders are actively engaging in conversations about implementation of AI. School leaders' perceptions of their role in adopting AI strategies centered on key elements, including leadership behaviors, stakeholder engagement in AI discussions, factors influencing technology adoption, and the role of learning-centered leadership. They emphasized the need for strong interpersonal skills to establish supportive structures, alignment with district and state goals, and a focus on all stakeholders' interests throughout implementation and monitoring (Tyson & Sauers, 2021).

Burke and Crompton (2024) found that teachers had perceptions and attitudes that supported the use of AI for student monitoring of work and classroom management, individual and group behavior management, individualized instruction and tutoring, and automated grading to support data-driven decision making to support student achievement. This aligns with Luckin et al.'s (2016) findings related to AI in education; that it can be beneficial, but there are concerns about it as well. It follows that, when utilized effectively, AI may afford opportunities to achieve educational goals and priorities in better ways with lower costs to school systems and could be used to support more individualized professional development for teachers and staff and a lower cost to school divisions (U.S. Department of Education, 2023; Virtual Arkansas, 2024). Artificial Intelligence could also assist with the clerical workload of teachers affording them more time to work directly with students, parents, and to plan for more engaging learning opportunities (U.S. Department of Education, 2023).

Concerns About AI

Current literature affirms stakeholders' concerns about the lack of research, policy, and guidelines related to AI, specifically the safety and ethical use and its implications in education (Fullan et al., 2024; Martin et al., 2023; U.S. Department of Education, 2023). The ethical and responsible use of AI tools require prioritization by education systems to assess the real time impact on teaching and learning (Fullan et al., 2023). "Research is lagging behind the rapid technological advancement in GenAI and educators are playing catch up each time a new version of a GenAI product emerges" (Fullan et al., 2023, p. 340).

According to the UNICEF National AI Strategies and Children Policy Brief (2020), there is limited literature about how AI is impacting the mental and physical state of children. Limited focus is directly given to safeguarding the rights of children in an algorithmic-oriented society, including protecting children from discrimination, exploitation, and abuse. In addition, access to AI technologies and strategies for career development and work-force ready preparation is a necessity in schools today (UNICEF, 2020). This study was motivated by the hope to add to the increasing literature and advance the understanding of how educators and administrators view and use AI.

Methods

The purpose of this study was to explore K12 educator and administrator knowledge, use, perceptions, and concerns related to AI. For this study, AI technology referred to technology that mimics human intelligence capabilities (e.g., ChatGPT, Claude, etc.) and K12 educators included classroom teachers and librarians. This quantitative study gathered data through two web-based surveys, one for K12 educators (23 Likert questions) and one for K12 administrators (24 Likert questions). In addition to collecting demographics, each survey was divided into sections with three to eight questions designed to collect information related to AI knowledge, AI use, AI perceptions, and AI concerns (see Appendix A and Appendix B). The study included participant consent to complete a survey designed to address the following research questions:

1. To what extent, if any, do current K12 educators know, use, perceive, and have concerns related to artificial intelligence?
2. To what extent, if any, do current K12 administrators know, use, perceive, and have concerns related to artificial intelligence?
3. In what ways, if any, does K12 educator knowledge, use, perceptions, and concerns related to artificial intelligence differ from that of K12 administrators?

Participants were asked to indicate, using a Likert scale, their agreement with statements related to their knowledge, use, perceptions, and concerns related to AI. Demographics were also collected related to educator gender, age, ethnicity, level of education, title(s), years of experience, and grade and subject level taught. Additionally, school location

(i.e., state) data was collected in an effort to gather perspectives from multiple states across the nation.

Sample

Purposive and convenience sampling were used to identify pools of K12 educators and administrators from multiple states. To identify potential participants, researchers used their individual networks to contact educators working in the field, current university education students, clinical supervisors for Educator Preparation Programs, and current administrators working in the field. Social media deployments and snowball sampling were also used to increase the sample size; participants were asked to forward the survey to K12 educators and/or administrators within their own networks. After cleaning the data and eliminating incomplete survey responses, a sample, with participants from five states (i.e., New York, California, Pennsylvania, Virginia, and Tennessee), of between 134 teachers and 61 administrators was analyzed.

Data Analysis

Descriptive statistics (e.g., question means, concept means, standard deviations, etc.) and frequency distributions were analyzed using Likert scale responses from the survey and reported out in a visual manner. Specifically, participant scores were calculated for each category (i.e., knowledge, use, perception, and concern) using a sum of their individually coded Likert responses. Several independent sample t-tests were conducted comparing the knowledge, use, perceptions, and concerns related to AI between K12 teachers and administrators.

Results

Demographics

Of the participants, 98 educators and 34 administrators completed all demographic questions in the survey which provided the demographics of the sample outlined within Table 1 and Table 2. The majority of the sample reported being White females ranging from 31 to 60 years old, with participants between 41-50 making up the majority for both educators and administrators. The participants included a sample of

educators and administrators from across five states. While most educators were from either California or New York, the majority of administrators were from either Virginia or California.

Table 1

Personal Demographics

	Educator %	Administrator %		Educator %	Administrator %
Gender			**Ethnicity**		
Male	16.33	29.41	Black or African American	1.02	11.76
Female	80.61	70.59	American Indian or Alaska Native	1.02	0.00
Non-binary/ other gender	3.06	0.00	Asian	2.04	0.00
Age			Latino	6.12	8.82
21-30	8.16	0.00	Multiple Ethnicity	29.59	23.53
31-40	25.51	23.53	Native Hawaiian or Pacific Islander	0.00	0.00
41-50	34.69	50.00	White	57.14	55.88
51-60	26.53	20.59	Other	3.06	0.00
61-70	5.10	5.88	**State**		
Older than 70	0.00	0.00	NY	28.57	2.94
			PA	3.06	0.00
			CA	51.02	41.18
			VA	13.27	47.06
			TN	4.08	8.82

The participants also included a sample of educators and administrators from both elementary and secondary levels. All participants were experienced in education, with no administrators having fewer than six years of experience and the majority of both educators and administrators having more than 20 years of experience. Additionally, the majority of administrators had between one to 10 years of experience in administration.

Table 2

Professional Demographics

	Educator %	Administrator %
Level		
Elementary	48.98	44.12
Secondary	51.02	55.88
Years Experience (in Education)		
Less than 1 year	3.06	0.00
1-5 years	7.14	0.00
6-10 years	15.31	5.88
11-15 years	15.31	8.82
16-20 years	13.27	26.47
More than 20 years	45.92	58.82
Years Experience (in Administration)		
Less than 1 year	*N/A*	2.94
1-5 years	*N/A*	29.41
6-10 years	*N/A*	35.29
11-15 years	*N/A*	17.64
16-20 years	*N/A*	2.94
More than 20 years	*N/A*	11.76

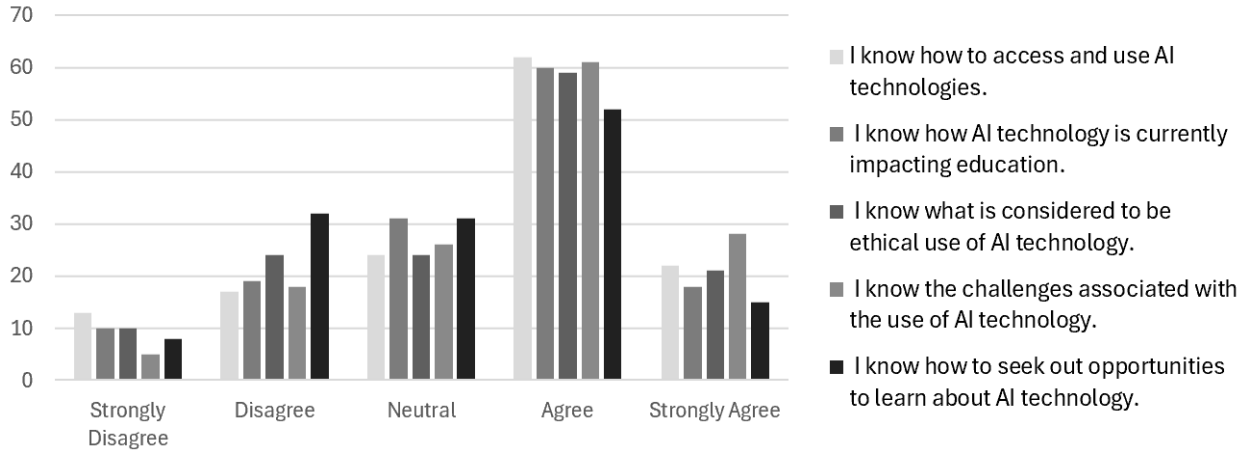
N/A = Not Applicable

K12 Educators Knowledge of AI

Out of 134 educators who completed all five survey questions related to knowledge of AI, results indicated a general level of knowledge. Just under half of all educators indicated they know how to access and use AI, how it is impacting the field of education, what is considered ethical use, the associated challenges, and how to seek out opportunities to learn more about AI (see Figure 1).

Figure 1

Educator AI Knowledge

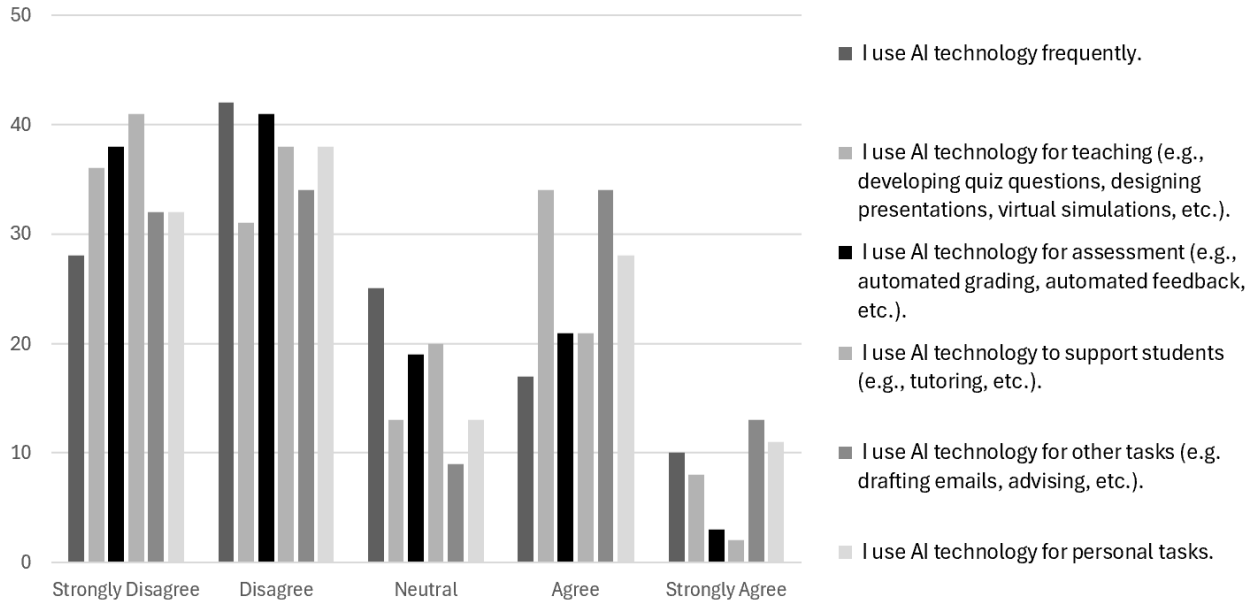


K12 Educators Use of AI

Out of 122 educators who completed all six survey questions related to use of AI, results indicated minimal AI use. Despite a general knowledge of AI, most educators reported not yet using AI (see Figure 2). Educators indicated infrequent use of AI, with most indicating disagreement regarding using AI to support students. A similar number of educators reported using AI for teaching and other tasks as those that reported *not* using it in those ways.

Figure 2

Educator AI Use

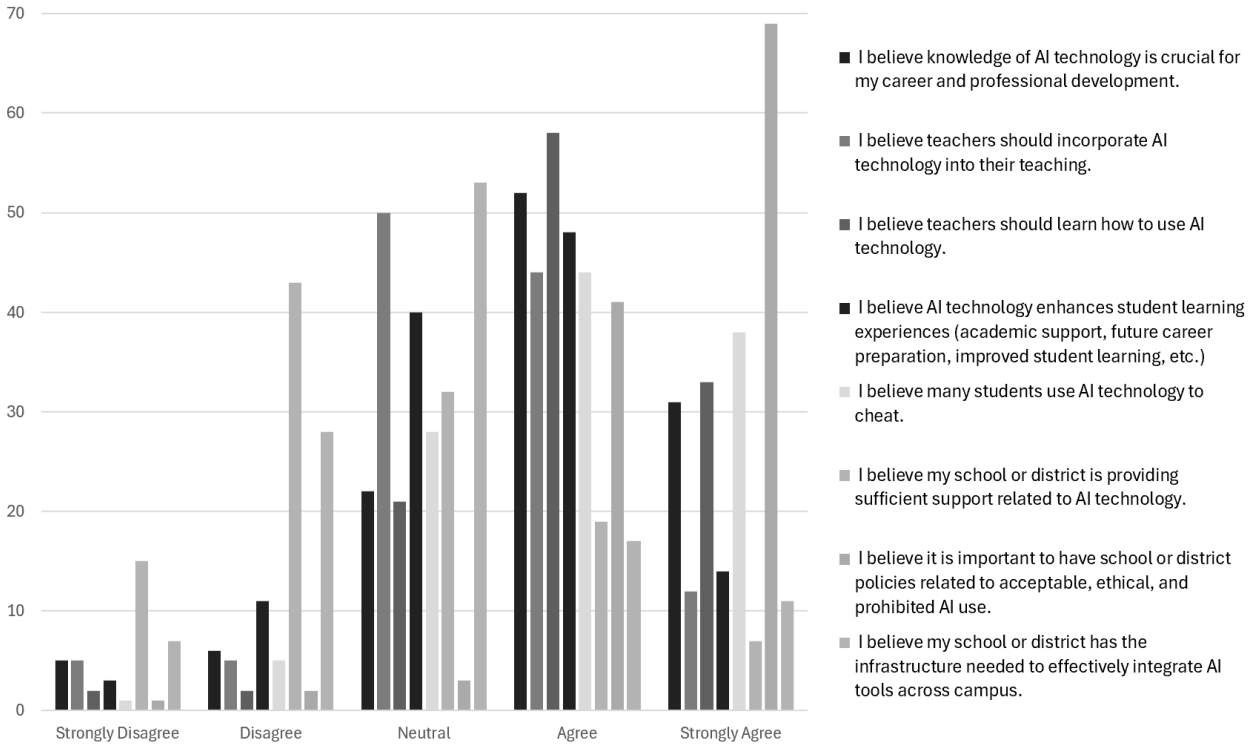


K12 Educators Perceptions of AI

Of the 116 educators who completed all eight survey questions related to perceptions of AI, results indicated a positive perception of AI (see Figure 3). Almost 60% of educators indicated strong agreement on the importance for school or district policies related to AI use, and the majority believe knowledge of AI is crucial to their career and professional development. However, a high percent indicated disagreement with the school or district providing sufficient support related to AI or infrastructure needed to effectively integrate AI. While the majority of educators indicated agreement that students use AI to cheat in school, many indicated agreement that AI could enhance student learning.

Figure 3

Educator AI Perceptions

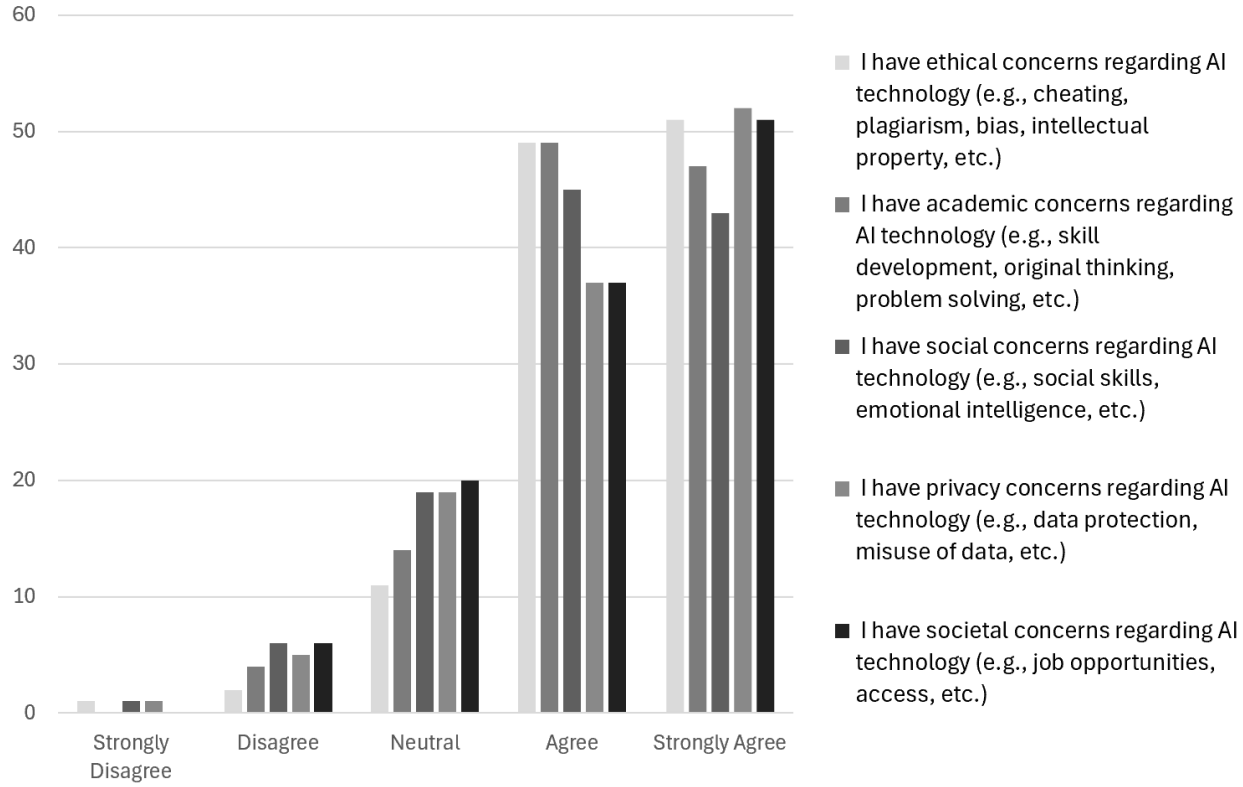


K12 Educators Concerns About AI

Of the 114 educators who completed all five survey questions related to concerns of AI, over 84% of all educators expressed ethical, academic, social, privacy, and societal concerns related to the use of AI (see Figure 4). Given that many educators indicated they believe students are using AI to cheat, it is not surprising that academic and ethical concerns were high with not one educator indicating strongly disagreeing with having academic concerns.

Figure 4

Educator AI Concerns

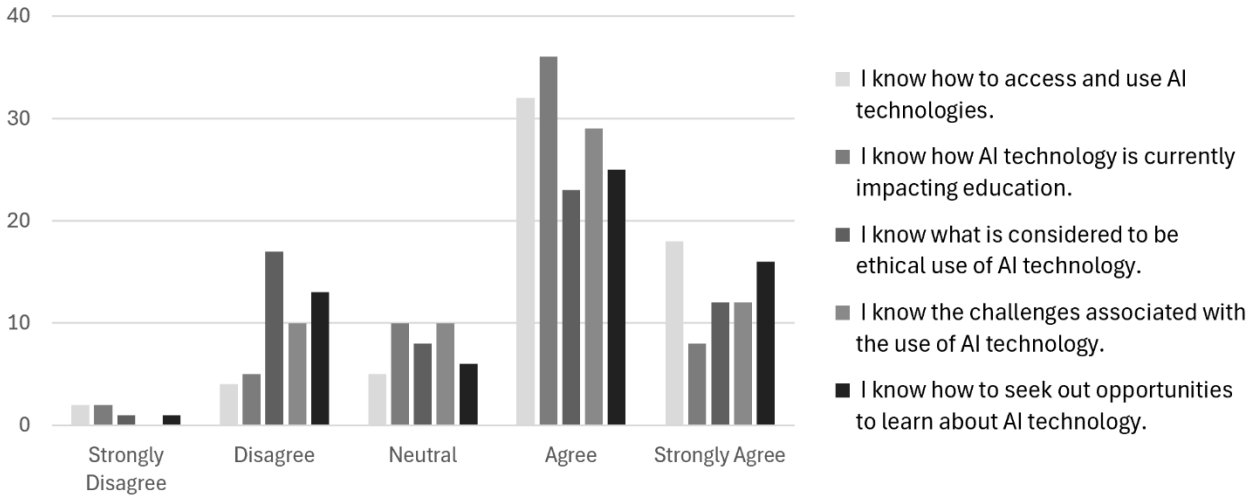


K12 Administrators Knowledge of AI

Of the 61 administrators who completed all five survey questions related to knowledge of AI, results indicated a general knowledge of AI. Much like educators, around half of all administrators indicated they know how to access and use AI, how it is impacting the field of education, what is considered ethical use, the associated challenges, and how to seek out opportunities to learn more about AI (see Figure 5).

Figure 5

Administrator AI Knowledge

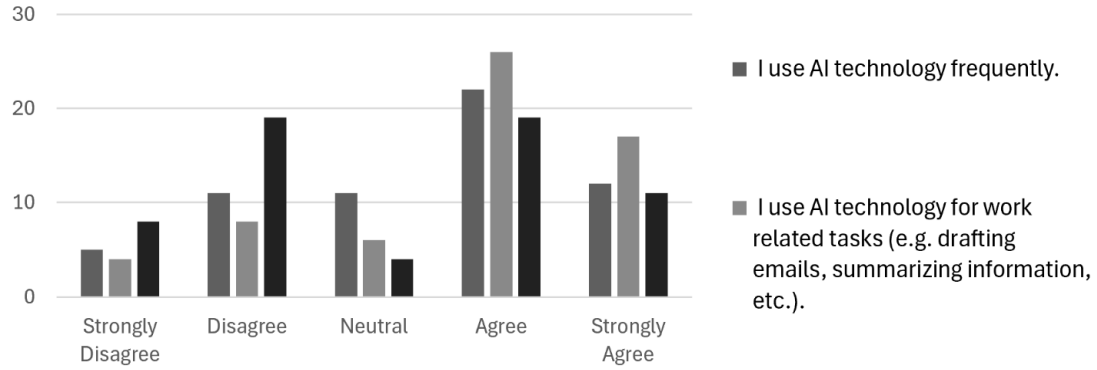


K12 Administrators Use of AI

Of the 61 administrators who completed all three survey questions related to use of AI, around half indicate some level of AI use (see Figure 6). With a high level of work-related use, it seems that administrators are incorporating AI into their daily tasks and decision-making processes.

Figure 6

Administrator AI Use



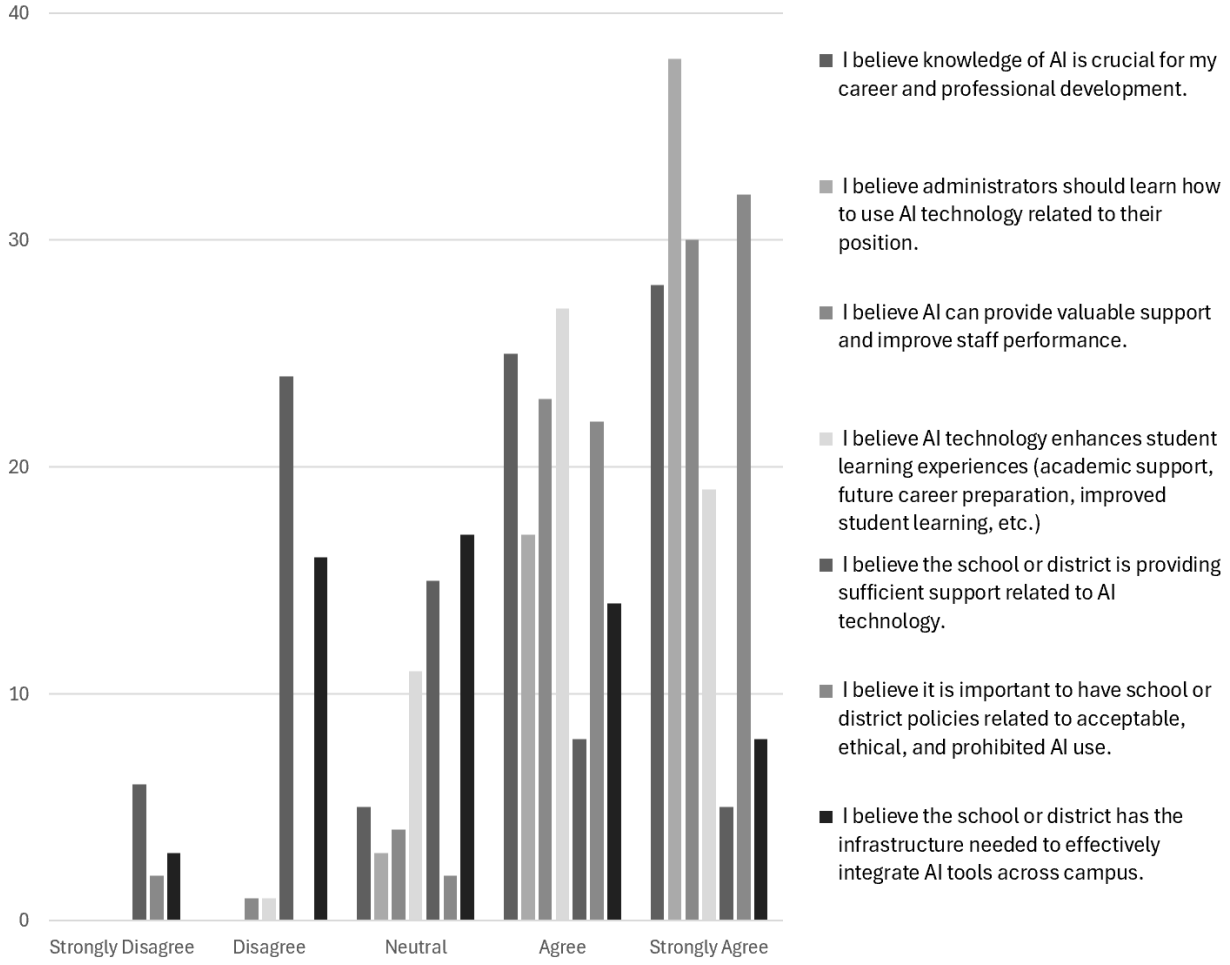
K12 Administrators Perceptions of AI

Out of 58 administrators who completed all seven survey questions related to perceptions of AI, results indicated a positive perception of AI amongst administrators (see Figure 7). Over 65% of

administrators indicated strong agreement that administrators should learn how to use AI related to their positions, however administrators echoed the educators' beliefs that schools or districts are not providing sufficient support related to AI or infrastructure needed to effectively integrate AI. Administrators also echoed the educators' beliefs that AI is crucial to their career and professional development, it can enhance learning, and it is important to have policies in place related to AI. This alignment in perspectives highlights a shared recognition of AI's value across roles, but also further underscores the urgent need for enhanced support and resources to realize its full potential.

Figure 7

Administrator AI Perceptions

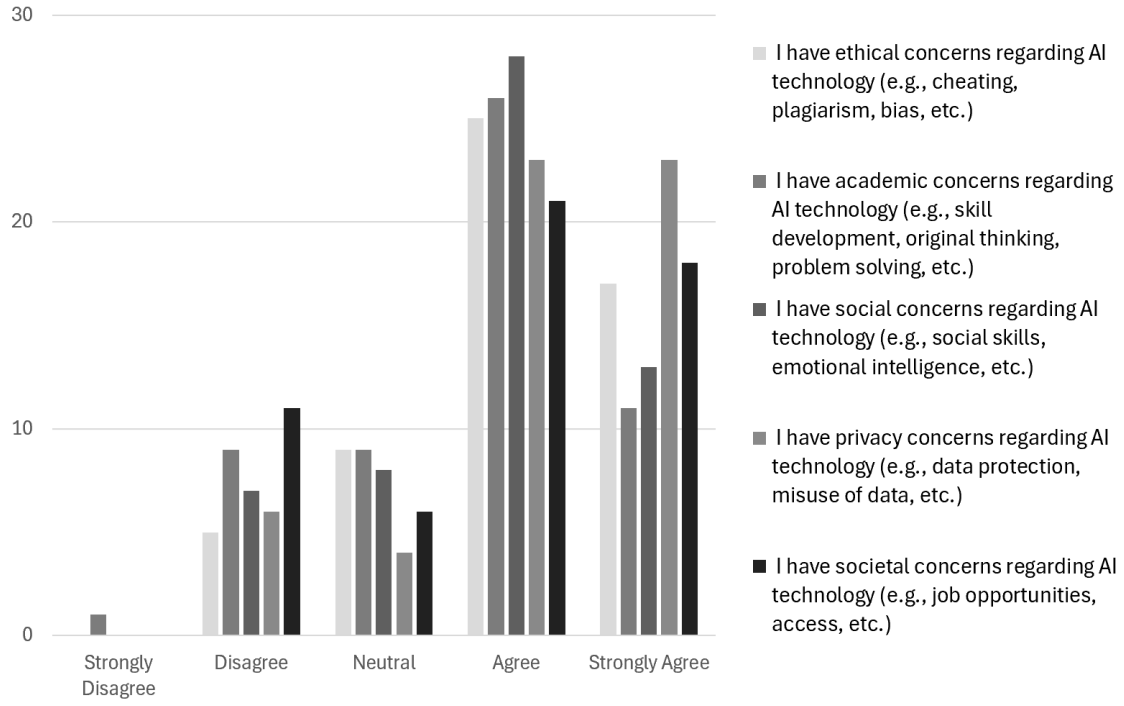


K12 Administrators Concerns About AI

Of the 56 administrators who completed all five survey questions related to concerns of AI, over 66% of all administrators expressed ethical, academic, social, privacy, and societal concerns related to the use of AI (see Figure 8). With only one administrator expressing strong disagreement to any concern, it is evident that apprehensions about AI are widespread not only among educators, but administrators as well. Administrators' strong awareness of potential risks suggests a proactive stance toward ensuring that AI is implemented responsibly and ethically. However, with so many administrators indicating a need for policy and support related to AI, it is suggested that the growing understanding and utilization of AI has not yet fully addressed the pressing need for enhanced data privacy protections, comprehensive policies, and a balanced approach to managing AI's benefits and risks.

Figure 8

Administrator AI Concerns



Educators vs. Administrators

To gain a clearer understanding of the differences between how AI is perceived and utilized across different roles within the educational system, analyses were aimed to compare the knowledge, use,

perceptions, and concerns related to AI between educators and administrators. By examining these variables, we can gain insights into the distinct ways each group interacts with and views AI and identify any significant differences that might inform targeted strategies for AI integration and support. For both educators and administrators, the mean score for each category (knowledge, use, perceptions, and concerns) was calculated using the Likert scale responses. As outlined by Table 3, several independent sample t-tests were conducted comparing the average scores for knowledge, use, perceptions, and concerns of educators to administrators. A statistically significant difference was found in AI use ($t(158) = -5.3904$, $p < .001$), with the average AI use higher for administrators ($m = 3.41$, $sd = 1.09$) than educators ($m = 2.48$, $sd = 1.02$). This suggests that administrators are more actively engaging with AI tools compared to educators. A statistically significant difference was also found in AI perceptions ($t(158) = -4.0393$, $p < .001$), with the average AI perceptions higher for administrators ($m = 3.94$, $sd = 0.44$) than educators ($m = 3.61$, $sd = 0.50$). Finally, a statistically significant difference was found in AI concerns ($t(158) = 2.6443$, $p < .01$), with the average AI concerns higher for educators ($m = 4.20$, $sd = .68$) than administrators ($m = 3.88$, $sd = 0.81$).

Table 3

Professional Demographics

	n	Mean (*m*)	Standards Deviation (*sd*)	t-values	*df*	*p*
Knowledge						
Educator	104	3.43	0.94	-1.6399	158	N.S.
Administrator	56	3.67	0.78			
Use						
Educator	104	2.48	1.02	-5.3904	158	**
Administrator	56	3.41	1.09			
Perceptions						
Educator	104	3.61	0.50	-4.0393	158	**
Administrator	56	3.94	0.44			
Concerns						
Educator	104	4.20	0.68	2.6442	158	*

Administrator	56	3.88	0.81

** p < .01, ** p < .001, N.S. = not significant*

Discussion

As Tyson and Sauers (2021) state, AI continues to gain momentum in K-12 learning environments and much of its potential is yet to be realized. As AI becomes increasingly integrated into classrooms, understanding the knowledge, usage, perceptions, and concerns of K-12 educators and administrators is crucial for supporting its effective and ethical implementation. Educators and administrators play distinct yet complementary roles in shaping AI's integration into schools. This study highlights key differences and overlaps in their experiences, which offer valuable insights into the current state of AI in education to identify potential areas for support, improvement, and effective integration to improve educational outcomes.

The findings indicate that approximately half of both educators and administrators feel knowledgeable about AI, aligning with trends suggesting that the growing prevalence of AI in everyday life has enhanced general familiarity (Kennedy et al., 2023). The parity between administrators and educators suggests that there is a consistent level of awareness and understanding of AI across different roles within the school system. However, the small percentage of administrators reporting limited knowledge highlights a leadership gap that could hinder efforts to establish effective AI policies and provide adequate professional development for teachers. As previous studies emphasize, administrators' knowledge of emerging technologies is critical for fostering systemic change (U.S. Department of Education, 2023).

The study revealed a divide in AI usage between roles, with administrators using it more frequently for administrative tasks, while educators report minimal use. This indicates that AI tools are increasingly recognized for their potential to streamline administrative functions, improve efficiency, and provide valuable insights for school management. It is possible that teachers are facing barriers such as limited training, lack of resources, or uncertainty about AI's value in instruction (Woodruff et al., 2023). Given administrators' influence over teacher adoption (Green & Hargreaves, 2020), intentional policies and partnerships are needed to align AI tools with classroom needs (KDOE, 2024; Virtual Arkansas, 2024).

Perceptions of AI were mixed among participants, with both groups recognizing its potential to enhance learning but also expressing concerns about its misuse, particularly regarding academic integrity. Differences in perceptions may reflect varying levels of exposure to AI tools and their applications, as well as differing roles and responsibilities. Administrators see its benefits in efficiency and decision-making, while educators express concerns about academic integrity and instructional impact. The finding that educators believe students may use AI to cheat reflects ongoing debates in the literature about ethical challenges and the need for policy development (U.S. Department of Education, 2023; White House, 2022). While administrators had slightly more positive perceptions of AI overall, the difference was modest, suggesting shared perception rooted in both optimism about its potential and concern over its risks. This echoes the literature highlighting the contrast between AI's promises and the practical realities of implementation (Luckin et al., 2016).

Concerns about AI are widespread, with educators expressing more worry about ethics and academic integrity, while administrators focus on privacy. With both the educators and administrators having high levels of concerns (Woodruff et al., 2023), this study brings attention to a pressing need for robust policy frameworks that align with literature and federal guidelines, particularly concerning data privacy and equitable access (Fullan et al., 2024; Martin et al., 2023; U.S. Department of Education, 2023). The pervasiveness of AI demands guidelines and specific training to better assist educators in mitigating these rapid and extreme changes. Ultimately, a collaborative approach that prioritizes both teacher and administrator perspectives will be critical for fostering trust and maximizing the benefits of AI in education.

Implications

By leveraging the insights of both educators and administrators, we can ensure that AI is effectively and ethically integrated into educational practices, ultimately enhancing teaching and learning processes. By understanding the views and addressing the concerns, we can facilitate the development of strategies that maximize the benefits of AI while mitigating any potential risks, ultimately fostering a more innovative and responsive educational environment.

When administrators effectively utilize AI for tasks such as data analysis, resource management, and decision-making, it not only showcases the potential but also establishes a precedent for its integration into teaching practices where the teachers are on the front lines. Given the critical role of administrators in shaping school policies and driving the integration

of new technologies, they must receive adequate training and resources to deepen their understanding of AI and its impact on the field of education. This will better equip them to empower their teachers in AI advancements within the classrooms.

Both educators and administrators acknowledged the value of AI; however, the findings also indicated that perceptions are mixed with both groups highlighting the need for more robust policy frameworks, better infrastructure, and comprehensive support systems to maximize the positive impact of AI in the classroom. These mixed perceptions underscore the need for enhanced support and resources to realize its full potential.

Widespread concerns and apprehension from both educators and administrators underscore the need for clear guidelines and ethical frameworks to govern the use of AI in educational settings. Additionally, the strong agreement on these concerns suggests that both groups are aware of the potential negative impacts of AI and require policy development, professional training, and open dialogues to help build trust and equip educators with the tools they need to navigate the ethical landscape of AI in education. Administrators' strong awareness of potential risks suggests a proactive stance toward ensuring that AI is implemented responsibly and ethically. However, with so many administrators indicating a need for policy and support related to AI, it is suggested that the growing understanding and utilization of AI has not yet fully addressed the pressing need for enhanced data privacy protections, comprehensive policies, and a balanced approach to managing AI's benefits and risks.

In addition, safety and ethical issues involving student privacy are coming to the forefront requiring a national policy response (U.S. Department of Education, 2023). Specific AI policies that align with federal student privacy laws should provide a framework for school leaders to ensure compliance with new technologies (U.S. Department of Education, 2023). In addition, school leaders and administrators should consider how teachers will use AI in compliance with federal laws such as the Individuals with Disabilities Education act (IDEA) when working with students with special needs. There should also be clear parameters on what and how student information is collected and used, including limited advertising targeted towards students (U.S. Department of Education, 2023). "These limits should put the burden on platforms to minimize how much information they collect, rather than burdening Americans with reading fine print" (U.S. Department of Education, 2023, p. 7; White House, 2022).

Limitations

Although the plan for this study was to collect data from as many educators as possible throughout the United States, the participants came from only five states. A more robust and representative sample of teachers from across the United States would have provided more generalizable findings. Initial data analysis also indicated survey fatigue as many participants did not complete the full survey but dropped off part way through. This smaller-than-desired sample size prevented some statistical testing.

Future Research

As AI technology increases in use in all areas of life, research in education will remain crucial. Expanding studies like this one with more diverse, global samples will help identify trends and provide insights into how educators and administrators worldwide engage with AI. Specifically, global explorations would illuminate how educators and administrators in other countries respond to similar questions about these aspects of AI. Future research could delve deeper into specific areas of knowledge, use, perceptions, or concerns, focusing on key developments and emerging issues.

Conclusion

This multi-state study about K12 educators' and administrators' thoughts on AI contributes to the literature on the current state in classrooms and schools in several areas throughout the United States. The findings indicate that there are statistically significant differences between educators' and administrators' thoughts and views, highlighting distinct differences in how AI is experienced and perceived across roles within the educational system, underscoring the need for targeted interventions to address these disparities.

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Appendix A

Teacher Survey Likert Questions

Teacher Knowledge

Rate your agreement with the following statements related to your **knowledge** of AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I know how to access and use AI technologies.	○	○	○	○	○	○
I know how AI technology is currently impacting education.	○	○	○	○	○	○
I know what is considered to be ethical use of AI technology.	○	○	○	○	○	○
I know the challenges associated with the use of AI technology.	○	○	○	○	○	○
I know how to seek out opportunities to learn about AI technology.	○	○	○	○	○	○

Teacher Use

Rate your agreement with the following statements related to your **use** of AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I use AI technology frequently.	○	○	○	○	○	○
I use AI technology for teaching (e.g., developing quiz questions, designing presentations, virtual simulations, etc.).	○	○	○	○	○	○
I use AI technology for assessment (e.g., automated grading, automated feedback, etc.).	○	○	○	○	○	○
I use AI technology to support students (e.g., tutoring, etc.).	○	○	○	○	○	○
I use AI technology for other tasks (e.g. drafting emails, advising, etc.).	○	○	○	○	○	○
I use AI technology for personal tasks.	○	○	○	○	○	○

Teacher Perceptions

Rate your agreement with the following statements related to your **perceptions** of AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I believe knowledge of AI technology is crucial for my career and professional development.	○	○	○	○	○	○

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I believe teachers should incorporate AI technology into their teaching.	○	○	○	○	○	○
I believe teachers should learn how to use AI technology.	○	○	○	○	○	○
I believe AI technology enhances student learning experiences (academic support, future career preparation, improved student learning, etc.)	○	○	○	○	○	○
I believe many students use AI technology to cheat.	○	○	○	○	○	○
I believe my school or district is providing sufficient support related to AI technology.	○	○	○	○	○	○
I believe it is important to have school or district policies related to acceptable, ethical, and prohibited AI use.	○	○	○	○	○	○
I believe my school or district has the infrastructure needed to effectively integrate AI tools across campus.	○	○	○	○	○	○

Teachers Concerns

Rate your agreement with the following statements related to your **concerns** with AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I have ethical concerns regarding AI technology (e.g., cheating, plagiarism, bias, intellectual property, etc.)	○	○	○	○	○	○
I have academic concerns regarding AI technology (e.g., skill development, original thinking, problem solving, etc.)	○	○	○	○	○	○
I have social concerns regarding AI technology (e.g., social skills, emotional intelligence, etc.)	○	○	○	○	○	○
I have privacy concerns regarding AI technology (e.g., data protection, misuse of data, etc.)	○	○	○	○	○	○
I have societal concerns regarding AI technology (e.g., job opportunities, access, etc.)	○	○	○	○	○	○

Appendix B

Administrator Survey Likert Questions

Administrator Knowledge

Rate your agreement with the following statements related to your **knowledge** of AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I know how to access and use AI technologies.	○	○	○	○	○	○
I know how AI technology is currently impacting education.	○	○	○	○	○	○
I know what is considered to be ethical use of AI technology.	○	○	○	○	○	○
I know the challenges associated with the use of AI technology.	○	○	○	○	○	○
I know how to seek out opportunities to learn about AI technology.	○	○	○	○	○	○

Administrator Use

Rate your agreement with the following statements related to your **use** of AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I use AI technology frequently.	○	○	○	○	○	○
I use AI technology for work related tasks (e.g. drafting emails, summarizing information, etc.).	○	○	○	○	○	○
I use AI technology for personal tasks.	○	○	○	○	○	○

Administrator Perceptions

Rate your agreement with the following statements related to your **perceptions** of AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I believe knowledge of AI is crucial for my career and professional development.	○	○	○	○	○	○
I believe administrators should learn how to use AI technology related to their position.	○	○	○	○	○	○
I believe AI can provide valuable support and improve staff performance.	○	○	○	○	○	○
I believe AI technology enhances student learning experiences (academic support, future career preparation, improved student learning, etc.)	○	○	○	○	○	○
I believe the school or district is providing sufficient support related to AI technology.	○	○	○	○	○	○
I believe it is important to have school or district policies related to acceptable, ethical, and prohibited AI use.	○	○	○	○	○	○
I believe the school or district has the infrastructure needed to effectively integrate AI tools across campus.	○	○	○	○	○	○

Adminstrator Concerns

Rate your agreement with the following statements related

to your **concerns** with AI technology:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
I have ethical concerns regarding AI technology (e.g., cheating, plagiarism, bias, etc.)	○	○	○	○	○	○
I have academic concerns regarding AI technology (e.g., skill development, original thinking, problem solving, etc.)	○	○	○	○	○	○
I have social concerns regarding AI technology (e.g., social skills, emotional intelligence, etc.)	○	○	○	○	○	○
I have privacy concerns regarding AI technology (e.g., data protection, misuse of data, etc.)	○	○	○	○	○	○
I have societal concerns regarding AI technology (e.g., job opportunities, access, etc.)	○	○	○	○	○	○