Indiana State
Department of Education

Policy Brief

AI and Education in Indiana: Policies for a Smarter Future

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DATE
Dec 8, 2024

Executive Summary

Over the next year, a selection of Indiana schools will integrate artificial intelligence (AI) into their curriculum, exploring benefits and challenges of AI adoption. In education, AI offers transformative potential, enabling personalized learning, administrative efficiency, and enhanced student engagement. However, gaps in ethical guidelines, data privacy, and educator training pose significant barriers. Current policies like the AI Systems Policy and Senate Enrolled Act 150 provide a foundation but require further alignment with education-specific needs. New policies should be created that focus directly on AI in Indiana schools. The State should also provide funded-training for school districts that will be using AI in their curriculum.

Recommendations

- **Create Local Education Policy:** Create a statewide "AI Ethics in Education" framework aligned with the principles in existing policies such as the AI Bill of Rights or Senate Enrolled Act 150.
- **Educator Training:** Establish state-funded professional development programs focused on the practical application of AI, ethical considerations, and strategies for addressing algorithmic bias.

Introduction

The implementation of artificial intelligence in education represents both an opportunity and a challenge for Indiana schools. As adaptive learning technologies and AI-powered platforms become integral to modern pedagogy, state-level actors are seeking to understand how best to incorporate these tools while navigating associated risks. The purpose of this policy brief is to provide a comprehensive analysis of the current landscape of artificial intelligence in education, with a focus on its integration in Indiana schools.

Background

Indiana has taken significant steps to integrate artificial intelligence into education, starting with local pilots and expanding into broader statewide initiatives. In the spring of 2023, the School City of Hobart partnered with Khan Academy to pilot Khanmigo, an AI-powered platform designed to support both teaching and learning. Teachers in Hobart utilized the platform as a "teacher assistant," streamlining tasks such as lesson planning, rubric creation, and student engagement strategies. Students also benefited from interactive features, including storytelling and college admissions preparation, showcasing the potential of AI to enhance educational experiences. [1]

Building on this success, the Indiana Department of Education (IDOE) launched the AI-Powered Platform Pilot Grant. This competitive grant awarded over $2 million to 36 school districts, supporting 112 schools and over 45,000 students during the 2023-2024 academic year. The grant aims to fund AI subscriptions and professional development, addressing two key goals: providing high-dosage tutoring for students and reducing teacher workload. Furthermore, 2,500 educators across the state will receive training to integrate AI tools into their instructional practices, addressing a national gap where 87% of educators have reported no prior AI-focused professional development. [1, 2]

Key Stakeholders

Indiana school administrators: These stakeholders, including superintendents and deans, are tasked with the operational and strategic implementation of AI tools within schools.

Indiana state legislators: As policymakers, legislators will play a critical role in defining the frameworks and regulations that guide AI adoption.

Parents and Students: As AI becomes part of student lives, the parents and students themselves need to be involved.

Problem Statement

Adaptive learning platforms, powered by artificial intelligence, are gaining traction in education for their ability to personalize instruction and enhance student engagement. [3] However, the rapid adoption of these technologies has outpaced the development of comprehensive policies to address the ethical, legal, and operational challenges associated with their use. [4]

Key gaps in AI policy for education include the lack of clear ethical guidelines for deploying AI tools in classrooms. This absence of guidance leaves schools vulnerable to issues such as algorithmic bias, inequities in access, and reduced accountability. [4]

[1] Indiana Department of Education. (n.d).

[2] AI Grant 2023 Award Memo.docx. (n.d.).

[3] Gligorea, I., Cioca, M., Oancea, R., Gorski, A.-T., Gorski, H., & Tudorache, P. (2023).

[4] Schiff, D. (2022).

AI in Education Benefits

Personalized Learning

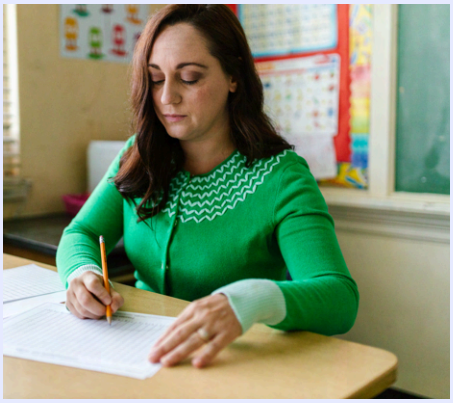
AI facilitates personalized learning by leveraging adaptive systems to cater to individual student needs. These systems analyze learner data, such as performance and engagement metrics, to deliver customized content, feedback, and instructional strategies. By dynamically adjusting the pace and level of difficulty, AI-powered tools enable students to learn at their own pace, thereby enhancing academic outcomes and engagement. [5]

Furthermore, personalized learning environments foster deeper understanding by addressing individual strengths and weaknesses, ensuring that educational resources align closely with each learner's goals and abilities. [6]

Enhanced Engagement, Retention, and Support for Diverse Learners

AI technologies enhance student engagement and retention by personalizing content delivery and adjusting difficulty levels based on performance. These adaptive systems, such as Yixue Squirrel AI, provide timely feedback and use gamified elements to sustain motivation. [5] [7]

Simultaneously, AI tools support diverse learners through features like real-time translation and text-to-speech, enabling non-native speakers and students with disabilities to access content effectively. By tailoring solutions to individual needs, AI fosters equity and accessibility, ensuring that learning environments accommodate varied demographic groups and promote inclusive educational outcomes. [6]



Administrative Efficiency

AI technologies streamline administrative tasks such as grading, attendance tracking, and resource management, enabling educators to focus on teaching. AI platforms automate routine inquiries and provide actionable insights through data analytics, helping institutions allocate resources effectively and address student needs proactively. [7] By reducing human errors and improving accuracy in workflows, AI enhances operational efficiency.

However, successful implementation requires robust infrastructure and staff training. When properly deployed, AI-driven administrative tools significantly improve school operations, ultimately supporting better educational outcomes.

[5] Gligorea, I., Cioca, M., Oancea, R., Gorski, A.-T., Gorski, H., & Tudorache, P. (2023).

[6] Vincent-Lancrin, S., & van der Vlies, R. (2020).

[7] Owoc, M. L., Sawicka, A., & Weichbroth, P. (2021).

AI in Education Challenges

Ethical Challenges

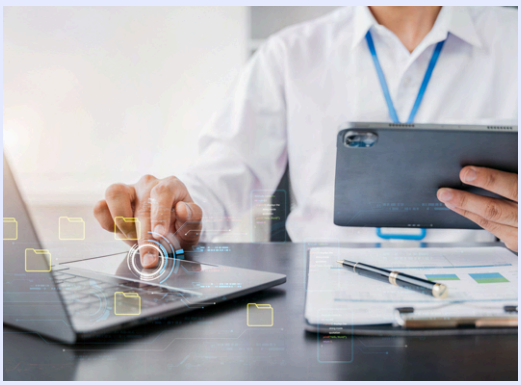
The integration of AI in education raises ethical concerns requiring careful oversight. A key issue is the lack of transparency in AI decision-making, often referred to as the "black box" problem, which complicates accountability and heightens risks of bias in areas like grading and admissions. [8] Additionally, AI systems collect extensive personal data, raising privacy concerns, particularly if this data is misused or leads to unintended biases, such as inferring sensitive attributes like socioeconomic status. [9]

Data Privacy

AI systems in education collect vast amounts of personal data, including academic records and behavioral metrics, raising significant privacy concerns. Without strong safeguards, this data is vulnerable to misuse and breaches, exposing students and educators to harm [9]. Many schools lack standardized data governance policies and struggle to meet basic compliance standards, let alone address unique risks posed by AI technologies [9]. Transparency about data use and secure storage practices is often inadequate, further complicating issues of consent [8]. To mitigate these risks, institutions must adopt robust frameworks with encryption, regular audits, and clear vendor obligations to prioritize data protection and privacy.

Educator Readiness & Training

The integration of AI in education requires educators to be adequately trained, yet 87% have never received AI-focused professional development, highlighting a critical readiness gap. [10] Without targeted training, educators may struggle to interpret AI outputs or align them with curriculum goals, limiting their effectiveness. [9] Many existing programs focus on operational use rather than addressing AI ethics, data privacy, and bias mitigation. [8] Policymakers must prioritize comprehensive professional development emphasizing hands-on practice, ethical considerations, and collaborative learning.



[8] Schiff, D. (2022)

[9] Central Indiana Educational Service Center (2023)

[10] An Update From the Indiana Department of Education for September 29, 2023. (n.d.)

Current Policies and Frameworks

Currently artificial intelligence in education is governed by a patchwork of policies at the state, federal, and institutional levels, each addressing specific aspects of its implementation.

However, these policies often lack cohesion, creating gaps in regulation and leaving schools without clear guidance for integrating AI effectively.

This section explores existing policy frameworks relevant to AI in education, highlighting their strengths, limitations, and implications for Indiana schools.

State of Indiana AI Systems Policy

The State of Indiana's AI Systems Policy is a robust framework for ethical and secure AI use in state agencies, emphasizing transparency and accountability. Guided by the NIST AI Risk Management Framework, it mandates strong data privacy practices, oversight by the Office of the Chief Data Officer, and stringent vendor requirements. This policy demonstrates Indiana's leadership in balancing innovation with public trust through responsible AI governance. [11]

Senate Enrolled Act 150: Artificial Intelligence and Cybersecurity

Indiana's Senate Enrolled Act 150 establishes AI governance for state agencies. A 15-member AI Task Force evaluates AI technologies, offering policy recommendations. By 2025, agencies must inventory AI use, detailing risks and fiscal impacts. The act mandates cybersecurity training, bias testing, and documentation of AI's privacy and rights impacts. Annual reports ensure transparency and legislative insights, demonstrating Indiana's commitment to ethical, responsible AI and data protection. [12]

Planning Guide for AI: A Framework for School Districts

The Planning Guide for AI, developed by Michigan Virtual and adapted by CIESC, helps school districts integrate AI responsibly. It emphasizes alignment with district goals, data privacy, equity, personalized learning, and innovative teaching. Key areas include educator training, stakeholder engagement, and regular risk assessments to tackle privacy, bias, and infrastructure issues. The guide offers actionable steps to foster trust, ensure ethical practices, and leverage AI inclusively. [13]

[11] Office of the Chief Data Officer. (2024).

[12] Indiana General Assembly. (2024).

[13] Central Indiana Educational Service Center. (2023).

Recommendations

To successfully integrate artificial intelligence in education, it is essential to expand the exploration and analysis of current and emerging policies. State policymakers and educational leaders should develop AI-specific policies for Indiana education at both the state and local school district levels. Since AI implementations will vary statewide, school districts can use statewide guidance as a foundation for local policies. This proactive approach addresses critical gaps that could hinder AI program's effectiveness. With AI already introduced in schools combined with the rapidly evolving pace of AI advancements, these recommendations should be prioritized in the legislative session.

Create Local Education Policy: Create a statewide "AI Ethics in Education" framework aligned with the principles in existing policies such as the AI Bill of Rights or Senate Enrolled Act 150. This policy would address bias, accountability, and inclusiveness. This policy would also serve as a foundation for school districts that need to create local policies that fit their specific needs.

Educator Training: Expand professional development programs to equip educators with the skills to use AI tools effectively and ethically. Establish state-funded professional development programs focused on the practical application of AI, ethical considerations, and strategies for addressing algorithmic bias. The benchmark for the number of educators trained should aim for at 75% in the districts that are part of AI pilot programs.

Conclusion

Indiana's integration of artificial intelligence in education highlights its transformative potential, offering personalized learning, enhanced student engagement, and improved administrative efficiency. Policies such as the State AI Systems Policy and Senate Enrolled Act 150 provide a strong foundation, focusing on ethical AI use, data privacy, and oversight. However, critical gaps remain in transparency, addressing algorithmic bias, and equipping educators with the necessary skills.

To fully realize the benefits of AI, Indiana must strengthen its approach by developing clearer ethical guidelines, implementing comprehensive data governance, and expanding professional development opportunities for educators. These actions will ensure equitable and responsible AI deployment, fostering trust among stakeholders. By addressing these challenges, Indiana can serve as a model for integrating AI into education, transforming it into a more accessible, innovative, and future-ready system that benefits students, educators, and administrators alike.

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