

Navigating AI and a Vision for the Future in the School District of Philadelphia

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Abstract

The rapid advancement of Artificial Intelligence (AI), particularly generative AI, presents both opportunities and challenges for education. This article examines the School District of Philadelphia's approach to navigating the integration of AI tools, drawing on lessons learned from previous experiences with widespread online tool adoption. The district recognizes the transformative potential of AI in education but emphasizes the critical need for careful planning and implementation to avoid unintended consequences. Key priorities include prioritizing student data privacy and network security, ensuring the efficacy of AI tools, and providing comprehensive training for all stakeholders – educators, administrators, and students. The article highlights the importance of teacher involvement in tool selection and implementation design, emphasizing that buy-in is essential for successful integration. By learning from past experiences, the School District of Philadelphia aims to foster a responsible and effective approach to AI in education, preparing students for a future shaped by this technology.

Lessons Learned

The widespread adoption of online tools in education has often resulted in unintended consequences or misuse. Remember when web 2.0 was all the rage and using more and more online tools was synonymous with being “innovative”? This created a culture that has been very hard to change, one that encouraged teachers to experiment using a multitude of tools and create accounts for themselves and every student in their class. It also led some educators to believe that students could work independently using online resources without the guidance or input from a teacher. As a result, data privacy and online safety were not at the forefront of most educators' minds, and the excitement of using new and more online tools became intoxicating.

The School District of Philadelphia is the eighth largest school district in the United States, with a population of 198,00 students. Of these, 117,956 are in District schools, and the remainder are in charter schools and other school types. Currently, the School District of Philadelphia's evaluation of online tools brings data privacy and network security to the forefront, followed by the efficacy of the tool itself. We know how data can be collected en masse to target, misinform, label, and sell. Therefore, we are mindful of prioritizing the security of student data. Additionally, the rise in cyber attackers targeting not just K12 institutions but also key K12

software vendors underscores how network security must be considered before any third-party tool is used. With the advent of generative AI tools, doubling down on educating all stakeholders, educators, district administrators, and students on data privacy, digital literacy, and network security is paramount. As with all online tools, teachers play a vital role in the effective and responsible use of these tools.

I came to the world of Educational Technology with a background as an elementary school teacher and a middle school administrator. In 2008-2010, Classrooms for the Future, a Pennsylvania Department of Education initiative, put laptops into high school classrooms for student use for the first time. The state wisely also provided funding to increase coaching to ensure teachers had the needed skills to integrate the tools within their content area. However, at the time, there was also a philosophy that wanted to standardize the classroom experience due to the high mobility of students in Philadelphia. As a result, the use of these exciting new adaptive online tools was also standardized. Classrooms for the Future High school teachers were required to implement an adaptive program two days a week within identified content areas. There was a belief that the online tools worked independently without teacher guidance, facilitation, and integration into the curriculum. Teachers were disillusioned, and some were downright angry about this style of implementation. We learned that for any classroom tool or strategy to be effective, teachers and school-based administrators need to be included in the review and selection of tools and implementation design. Without buy-in, knowledge, and thoughtful integration, it is nearly impossible for any tool to yield any benefit.

Therefore, as we look forward to partnering with educators to implement and adopt Generative AI tools, we are considering these lessons learned and will focus on data privacy network security, developing teacher, administrator, and student knowledge, and gathering feedback to guide implementation; and working with trusted partners to develop guidelines, training and implementation strategies.

AI Use and Adoption

AI is embedded in almost every online tool we use and Generative AI has the power to transform every industry – including education. As educators, we have a responsibility to prepare our students to be successful in a world dominated by AI. This means when new tools become available, we must educate our staff and collectively determine our approach so it is used effectively.

Lessons learned over the years have influenced our review and selection of tools. Our online resource adoption protocols have matured and now require contracts in place to ensure the safe use of these tools. We have also learned that a collaborative approach in the review and selection supports the successful adoption of new tools.

With the support of ISTE (International Society of Technology in Education), over the course of eight months, the School District convened cross-functional AI Learning and Feedback sessions designed to educate participants on the types of AI that currently exist and the power

and promise of Generative AI. We included teacher coaches, curriculum specialists, special education and other teachers, principals, District leaders, high school students, and parents to educate and gather feedback. We reviewed national and state-level AI executive orders, guidelines, and/or policies, and we continue to participate in national AI educator groups to learn how other school districts are approaching the use of generative AI tools.

The consensus from our stakeholder feedback sessions was to proceed cautiously into this space with our educators and students. It was clear that many participants felt that we failed children when it came to the use of social media by not knowing, and therefore not preparing, staff and students about the harmful and intentionally addictive nature of those tools.

We know now that ongoing training, guidance, and education are needed for staff, students, and families to realize the promise of AI as well as understand and mitigate the potentially harmful aspects of AI. Of course, keeping student and staff data secure meant a free tool such as Chat GPT would be off the table for use if we could not get a signed contract in place to maintain ownership of District data and prevent the District's data from being used to train its models.

Participants in the Learning and Feedback sessions learned that while Generative AI is quite powerful, the content produced is not always accurate and is prone to bias. Therefore, a teacher is essential to guide effective use and promote learning. Participants also believed that Generative AI cannot replicate the relationships and dialogue needed for real learning to occur. The role of a teacher in instruction is imperative and consistent with the mantra in many AI reviews: We need a human at the center of AI use in order to realize the benefit that Generative AI has to offer.

A Continuum of Use

As a result of many stakeholder engagement sessions and work with an executive committee, Generative AI guidelines were developed and released. These guidelines educate staff, students, and families on the power and risks associated with Generative AI and provide guidance as to how it can be used effectively to support learning. The guidelines are grounded in core principles such as:

- Student-Centered Learning
- Academic Integrity and Responsible Use
- AI Literacy
- Professional Learning
- Privacy and Data Protection
- Equity, Inclusion, and Accessibility
- Safety and Well Being
- Continuous Evaluation and Improvement

For both staff and students, within the AI Guidelines, there are suggestions for using AI as a

thought partner, a tool for personalizing activities, and as an assistant to automate routine tasks. An AI Use Continuum suggests, for teachers and students, various levels of AI use and the type of disclosure and citation needed so the ways that Generative AI can effectively and ethically support their work are clear. To educate and keep teachers and staff informed, an asynchronous course, “Understanding Data Privacy and AI Fundamentals,” was developed and taken by all staff to provide foundational knowledge about using online tools and specifically addressed the use of Generative AI at the start of the school year in 2024.

Valuable Partners

It takes time and consistency to develop the skills and knowledge that foster effective instructional practice. We believe that there are two types of learning that need to occur in order for Generative AI to be used effectively. First, staff need to understand how Gen AI is different from previously used AI-powered tools and the risks associated with the use of Gen AI. Second, educators need to explore the potential benefits and practice using AI in the development of engaging and differentiating instructional activities. It takes time and multiple modalities to reach and impact all staff. The District has distributed the Generative AI Use Guidelines to all staff and offered training in a variety of modalities: synchronous, asynchronous, and in-person. We will continue to develop and offer opportunities with our trusted partners.

The International Society of Technology in Education (ISTE) is a valuable partner. ISTE brings a national perspective and expertise to guide adoption. Our ISTE partner assisted us with designing and facilitating the AI Learning and Feedback sessions that were offered, as well as synthesizing all of the information gathered to inform the development of Generative Artificial Intelligence Guidelines that were released in August of 2024.

The School District of Philadelphia participates in a GenAI Community of Practice for District Leaders that is organized by AHEAD. Through this monthly dialogue, we have learned about different types of AI adoptions throughout the country. Thanks to information sharing with other districts, we have developed an online tool hub to educate staff and students and support the effective and safe use of online tools.

The University of Pennsylvania will partner with the School District of Philadelphia to develop and provide deeper training to teachers, district leaders, and school leaders. This pilot, Pioneering AI in School Systems (PASS), will offer comprehensive in-person training to a variety of levels within the organization to develop staff knowledge and expertise in using Gen AI. This pilot will greatly assist in future AI professional development that will be offered to ensure that teachers and district leaders use AI effectively in their daily work. Working together with professional organizations and university partners, school districts can make the most informed decisions.

Vision for the Future

AI can assist with many common tasks, such as drafting an email or creating a weekly

parent/student newsletter, but it can be leveraged for more sophisticated uses, such as developing differentiated approaches to teach and engage students in the mastery and demonstration of knowledge. AI can become a powerful assistant to teachers as they reflect on their practice, adapt lessons to multiple levels and student interests, create more engaging activities, check the accessibility of an activity for all types of learners, and create visual aids for students. AI can also assist with administrative tasks such as developing a project plan, drafting job descriptions, and organizing and summarizing large data sets. As educators and administrators, we can continually refine our approach to AI by consulting students and staff on an ongoing basis of how they are using AI. From lessons learned in the recent past, we will continually teach staff and students about effective uses and the real danger associated with online tools.

Navigating the AI revolution in education requires a thoughtful, deliberate, and collaborative approach. By prioritizing data privacy, fostering a culture of continuous learning, and embracing a human-centered approach to AI integration, the School District of Philadelphia can ensure that AI serves the best interests of students and empowers them to thrive in the 21st century.