The AI-Ready Pilot at Seckinger High School

August 2025

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Purpose of the Report

Gwinnett County Public Schools (GCPS) launched the AI-Ready pilot program at Seckinger High School to help students understand how artificial intelligence (AI) works and develop the skills needed to be ethical and responsible users, developers, and decision-makers of AI in their future careers and civic life. To evaluate the impact of the AI-Ready pilot, researchers from Georgia State University assessed the program's effects on student and teacher learning, beliefs, and perspectives as well as the systems and leadership practices that support successful implementation and address remaining challenges.

This report describes the AI-Ready pilot and the outcomes of the evaluation to support other schools and districts in implementing evidence-based AI integration to support the practice of teaching and process of learning.

Methodology of the Evaluation

To conduct the evaluation, researchers from Georgia State University conducted structured empathy interviews with:

- 39 students (diverse in gender, race, and academic interests)
- 16 teachers (across STEM and non-STEM disciplines)
- the principal of Seckinger High School

To analyze the data, researchers used thematic analysis that combined pre-defined topics of interest with emergent themes to capture the depth and nuance of participants' experiences. Information about the four researchers can be found at the end of this report.

Organization of the Report

The next section describes the AI-Ready pilot in GCPS. After describing the foundations of the pilot, the report will discuss implications for leadership and organization, teacher development, and student experience. The latter sections are based on the findings from the evaluation. In each section, the report aims to be informational and, when appropriate, prescriptive to schools and districts that are hoping to learn from GCPS to inform their own AI implementation strategies.

The AI-Ready Pilot

Gwinnett County Public Schools

Gwinnett County Public Schools (GCPS) is the largest school district in Georgia and the 14th largest in the United States, serving over 180,000 students across over 130 schools. GCPS is organized into 19 geographic clusters, each comprising multiple elementary schools that feed into middle school(s) and ultimately high school(s). The district is known for its diversity, with students representing 181 countries and speaking 108 languages, and for its commitment to academic excellence, having twice won the prestigious Broad Prize for Urban Education.

The Seckinger cluster is one of the newest and most innovative clusters within GCPS, comprising three elementary schools, one middle school, and Seckinger High School. Seckinger High School opened in 2022 and currently serves over 2,300 students in grades 9–12. The school describes its student body as "beautifully diverse", including racial diversity, economic diversity, and multilingual learners.

GCPS AI-Ready Philosophy, Pilot, and Framework

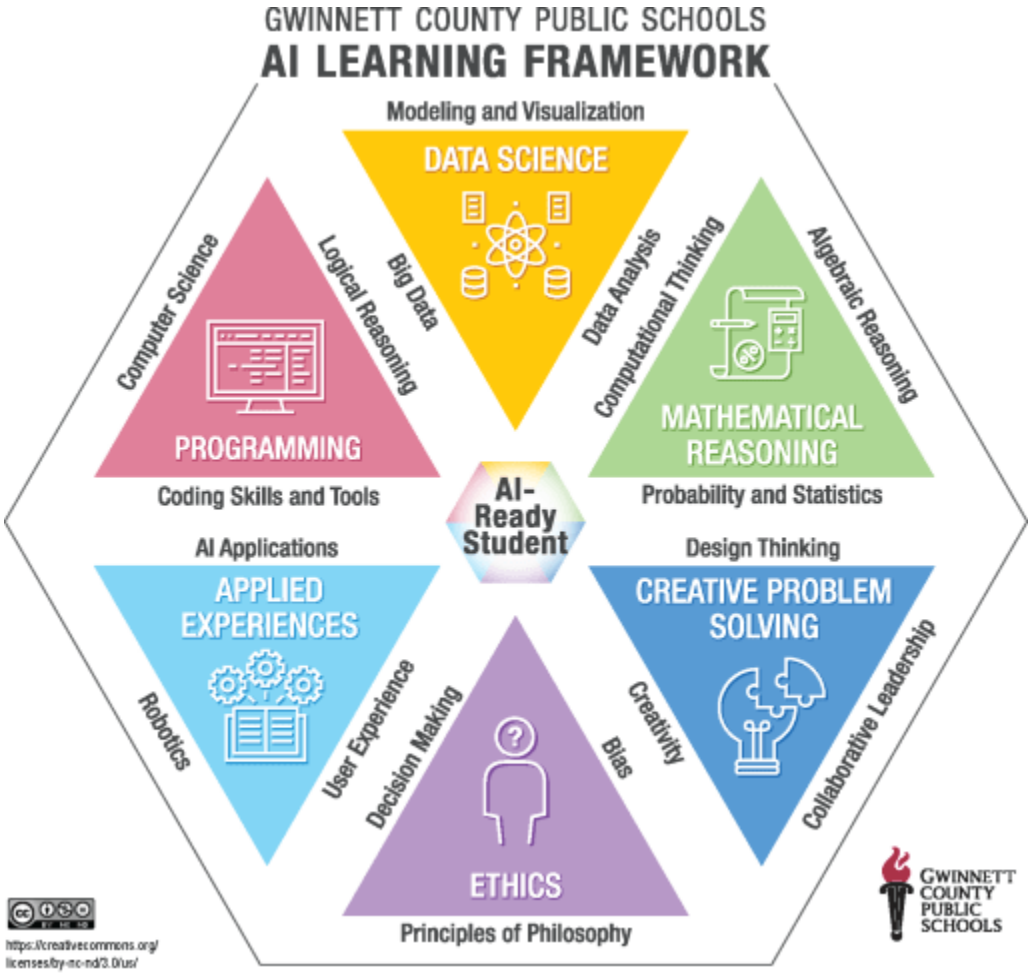
Gwinnett County Public Schools (GCPS) launched the AI-Ready pilot in 2019 in the Seckinger cluster of schools as part of a broader commitment to preparing students for the rapidly evolving demands of college, careers, and civic life. GCPS believes that to thrive in the future, students must be AI-Ready.

Image from GCPSK12.org

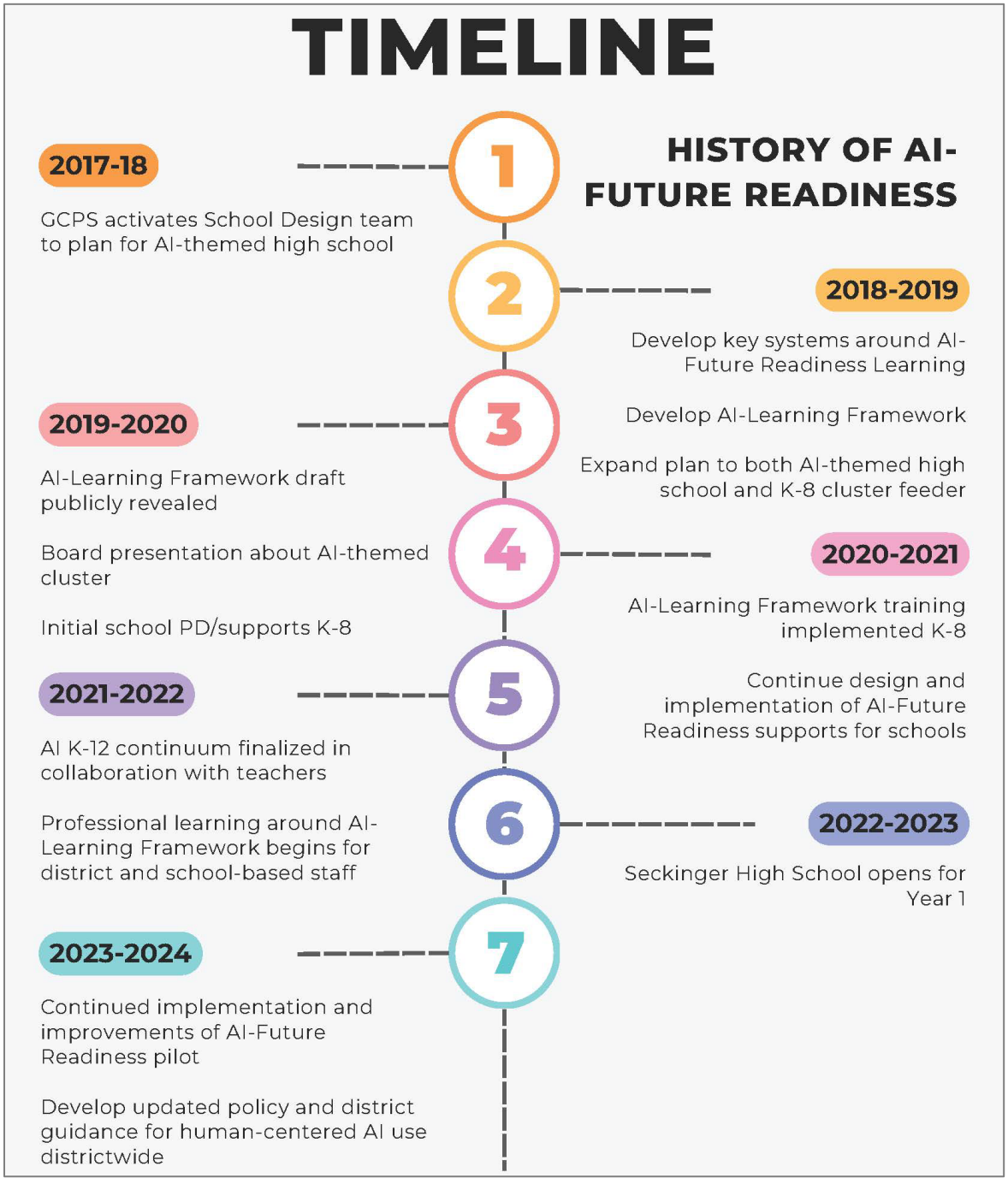
AI-Readiness in GCPS means more than just using new tools—it means developing students who are ethical, responsible users, developers, and decision-makers of AI. The pilot includes both **embedded AI learning** across all

K–12 content areas and a **discrete AI pathway** at the high school level. This tiered approach ensures that all students build foundational AI literacy, while those with deeper interest can pursue rigorous technical content.

The initiative is guided by the AI Learning Framework, which helps teachers integrate AI concepts into their instruction in ways that align with their subject. The framework is an intentional merging of human-centered and technical skills. At the start of the pilot, teachers were asked to align with at least one category of the AI Learning Framework with many of their lessons and, over time, with each lesson. Now, several years into the work, teachers are asked to align with a second category or to pick a category that is less obviously aligned with their subject area, such as mathematical reasoning in English class (discussed more in the teacher development section). As we will discuss in the student experience section, many students find that aligning lessons with the AI Learning Framework helps them to understand the higher-order skills that they are developing and how their learning and assignments prepare them for the future.



The district also developed a Guidance for Human-Centered AI Use, created in collaboration with students, teachers, leaders, and national partners like Digital Promise and the EdSAFE AI Alliance. This guidance outlines ethical principles and practical expectations for AI use in schools to be applied in decision-making. It also includes GCPS's Acceptable Use Policy for Students. Within these guidelines, the district has been supportive of evaluating and implementing new AI tools, especially in the Seckinger cluster.



It might be impractical for other districts or schools to fully implement the AI Learning Framework as the Seckinger cluster has (i.e., each lesson, across the curriculum, is connected to an element of the framework). However, in our study of the Seckinger cluster, we found that the AI Learning Framework instilled several benefits—some of which reached beyond AI-readiness. Thus, using this framework or integrating elements into a different overarching framework is worth exploring. The benefit of the framework for Seckinger has been:

Share a Clear Vision

The AI Learning Framework provides a shared language and structure for integrating AI across disciplines. It helps teachers see how AI connects to their existing goals, whether through data analysis in social studies or creativity in art.

Design for Both Breadth and Depth

Embedding AI across content areas ensures that all students gain experience as they prepare for their future. In addition, offering a discrete AI pathway allows for deeper technical learning. This layered approach supports both balance and excellence.

Create Systemwide Alignment

The pilot spans elementary, middle, and high school levels, ensuring continuity and progression. This vertical alignment helps students build on their knowledge year after year and allows teachers to collaborate across grade bands in addition to across disciplines.

Ground Innovation in Ethics

The prominence of ethics in the framework and the district's emphasis on human-centered AI use ensure that implementation is not just about technology, but about preparing students to use AI responsibly and thoughtfully in a complex world.

Structuring an AI-Ready School: Organization, Leadership, and Resources

This section of the report describes the leadership initiatives, investments, and strategies for supporting the AI-Ready pilot at Seckinger High School. Much of the findings discussed below are from discussions with district leadership, the interview with the principal, and corroborating information from interviews with teachers and students.

Leadership Encourages Innovation Through a Shared Mission

At Seckinger High School, the leadership team has cultivated a leadership approach that supports innovation, risk-taking, and professional renewal—practices that align well with the AI-Ready pilot but are not exclusive to it. These strategies reflect a broader commitment to empowering educators and fostering a dynamic school culture.

The AI Learning Framework has served as a unifying mission that gives teachers a clear goal and a renewed sense of purpose. According to the principal, the framework has "provided a spark," especially for veteran educators:

"We've had teachers that have been working on their craft for 5–10–15–20 plus years, and when they come here, it's something new. It's something new to grab onto, something new and exciting to kind of rejuvenate your career in education… They can continue to learn and grow as an educator, like more purpose in what they're doing."

This shared mission is supported by a leadership philosophy that values experimentation and embraces failure as part of the learning process. The principal emphasized the importance of creating a safe environment for teachers to try new instructional strategies without fear of judgment:

"With the new technology, one big thing is allowing people to fail… Invite me to see this lesson, and if it doesn't go the way you want it, it doesn't bother me at all… We would rather you try and fail than not to try at all. That way, everybody fails forward. We learn from our mistakes, and we keep moving."

This mindset has helped build a culture where teachers feel trusted and supported in their efforts to innovate. The principal also acknowledged that educators are drawn to the profession because they want to make a difference, and the framework helps them to see their work through a new lens:

"Nobody really chose education for the high salaries… It's because they want to work with kids. So people are here because they want to make a difference… and sometimes people need a little nudge here and there."

Together, these leadership practices—fostering a shared mission, encouraging risk-taking, and supporting professional growth—create fertile ground for innovation. While they are currently applied to the AI-Ready pilot, they represent a flexible leadership model that could benefit any school striving to inspire and empower its educators.

Investments in Teacher Leadership

A key leadership strategy at Seckinger High School has been the teacher leadership team, which identifies and supports teacher leaders across disciplines to guide the implementation of the AI Learning Framework. From the outset, the principal prioritized building a diverse leadership team that included representatives from all core academic areas, the AI pathway, and the arts. As the principal explained, "Year one, we started with six teachers… and then shortly after we added a visual arts teacher, so we had fine arts covered, and we had the other core areas covered."

This team has since grown to include 12 to 13 educators who are deeply invested in the work. These teacher leaders are not only implementing AI practices in their own classrooms but also researching tools, experimenting with new strategies, and sharing their findings with colleagues. They meet regularly through quarterly team meetings and dedicated planning sessions to design and deliver professional learning. The provide support by leading summer training, facilitating AI integration professional development on digital learning days, publishing the weekly newsletter for AI instructional strategies and resources, and mentoring peers in responsible AI use. These lead teachers also contribute to curriculum development and foster a collaborative culture that encourages mindset shifts and authentic integration of AI across disciplines.

In addition to disciplinary expertise, the school has cultivated a group of teachers with specialized knowledge in AI integration. This dual expertise—disciplinary and AI—has been critical to the school's implementation of the framework. The principal noted that while many schools have teachers who "play around" with AI, Seckinger has developed a deeper bench of educators who are leading the way in thoughtful, curriculum-aligned integration.

Hiring decisions have also been guided by a desire to bring in educators who are open to innovation and capable of thinking creatively about their instruction. For example, a language arts teacher known for her inventive approach to lesson design was recruited specifically for her potential to integrate AI into humanities instruction.

While the leadership team has made significant progress, the principal acknowledged that full implementation of the AI Learning Framework is still a work in progress. Some teachers are still learning how to apply the framework beyond the obvious connections. As the principal put it:

"It's really easy to use the mathematical reasoning wedge when teaching math… but pick one of the other 15 elements of that framework and say, we're really going to focus on data science."

Encouraging teachers to see their content through a new lens is part of the ongoing effort to deepen and broaden the framework's impact.

Investments in Onboarding and Professional Learning

The principal at Seckinger High School emphasized that one key area of investment is teacher onboarding. The school provides structured support not only for new teachers but also for those who are new to Seckinger specifically. Each summer, the AI leadership team facilitates a cross-school onboarding experience for educators across the cluster, introducing them to the AI Learning Framework. As the principal explained, this requires intentional planning and compensation:

"We bring them all over here and give them the AI 101… We've got to pay our teachers to come in and spend their time teaching other teachers, but we also have to pay them to come in and plan what they're going to teach."

In addition to onboarding, the school funds summer work opportunities that allow teachers to continue learning and preparing outside of the regular school year. These stipends support curriculum development, lesson planning, and professional growth:

"We've had the opportunity to fund some of the learning that our teachers need and provide supplements to teachers so that they can continue outside of a regular school day to learn and grow and to prepare things through the summer."

These investments create the conditions necessary for sustained innovation and high-quality teaching. They reflect a leadership approach that values preparation, collaboration, and a strong foundation for instructional initiatives.

Fostering a Participatory Culture

One of the defining features of Seckinger High School's leadership approach is its commitment to building a participatory school culture that actively responds to student interests and encourages engagement beyond the classroom. While not specific to the AI-Ready pilot, this philosophy plays a critical role in supporting the broader goals of student empowerment and future readiness.

The principal emphasized that extracurricular involvement is seen as a key driver of academic engagement: "We want folks engaged outside of the classroom because we know if they're engaged outside of the classroom, they'll be more engaged inside of the classroom." This belief is reflected in the school's rapid expansion of student opportunities. In its first year, Seckinger offered 28 sports teams and nearly 50 clubs. That number has since grown to over 70 clubs, many of which were created in response to student interests. The principal explained, "If a student has an interest, we want to find a way to make that happen."

The school's culture is further strengthened by active family and community involvement. The principal emphasized the role of engaged parents and local partnerships in reinforcing high expectations and supporting student success: "We've got great families that are invested in what's going on with their kids." A regular school newsletter helps keep parents informed about school activities.

Community events, such as a science fair/AI cluster night, have drawn large crowds and helped build a sense of shared purpose beyond the school walls. "We had a huge science fair/AI cluster night, and there were over 2,000 people here. There was NO parking anywhere on the premises," the principal recalled, highlighting the enthusiasm and support from the community.

This participatory culture is supported by a strong network of booster clubs, parent involvement, and teacher mentors. Structures like the CTA, school council, and athletic leadership teams help extend the school's reach into the broader community and ensure that students have access to meaningful, supported experiences.

Takeaways Related to Organization, Leadership, and Resources

- AI integration can provide a renewed sense of purpose to veteran teachers.

- Trying new approaches and activities should be encouraged and observed by leadership, including learning through failures.
- A teacher leadership team with expertise in disciplinary content and AI integration supports implementation in various disciplines and the development of other teachers in the school or district.
- Teachers need time and compensation for professional learning, curriculum development, and lesson planning to thoughtfully integrate AI into current disciplinary practices.
- Creating a school environment in which student interests are honored and parental and community involvement are prioritized helps anchor AI integration in student future- and career-readiness.

Developing AI-Ready Teachers: Professional Learning and Culture of Empowerment

This section of the report describes the teacher development efforts supporting the AI-Ready pilot at Seckinger High School. We also detail results from the teacher evaluation and teacher interviews. Teachers who participated in the study represent all major disciplines within the school. Not all teachers on the leadership team were interviewed, but they are overrepresented in the data.

Teachers Feel Empowered and Future-Focused

Across interviews, teachers at Seckinger High School expressed strong support for the AI Learning Framework and its role in preparing students for the future. They consistently described the initiative as both meaningful and motivating, and many shared a deep sense of pride in being part of what they call the "AI School" within the district.

Teachers reported that the framework has helped them grow professionally and reimagine their instructional practices. One veteran teacher of 16 years reflected, "I feel like I've grown more in the last 3 years [at Seckinger] than I did in the first 13," emphasizing how the initiative has reinvigorated their teaching and deepened their impact on students. Others described the integration of AI as a natural evolution of education, with one teacher stating, "To us, this is just what education is now." With the AI Learning Framework, the shift in how these teachers see education has been significant, transforming their way of thinking and information processing and allowing them "to have more freedom to be a little bit more challenging with that inquiry and problem-solving piece."

The use of AI tools has also enhanced teachers' ability to plan, assess, and differentiate instruction. One teacher described AI as a "co-teacher or a thought partner" that helped "leverage data to pinpoint exactly where every single one of our students as far as strengths and weaknesses," explaining how it has helped streamline lesson planning, target student needs more effectively, and elevate the overall quality of instruction.

Importantly, teachers view their participation in the AI-Ready pilot as a long-term commitment to educational innovation. A teacher highlighted that "AI is continuing to evolve, so it's a constant process of changing and improving with it." They see the work as a service to students—an investment in helping them become ethical, capable, and future-ready learners. As one teacher put it, "I think it's the future. I think you're doing it to service to the kids."

This collective sense of purpose and pride underscores the cultural shift taking place at Seckinger, where AI integration is not just a technical change but a catalyst for professional growth and instructional transformation.

Most and Least Common Concepts in the AI Learning Framework

Teachers at Seckinger High School perceive the AI Learning Framework elements as fundamental for preparing students for future careers and fostering ethical engagement with AI. This shared objective emphasized the development of students as "proficient users" who understand "the ethics behind it", alongside critical thinking, logical reasoning, and design thinking necessary for them to think like the AI thinks. Thus, AI **ethics** and **problem-solving** consistently emerged as the most frequently and thoroughly integrated concepts across classroom teaching. In AI-integrated practices, teachers facilitate discussions focusing on responsible AI use, plagiarism, and the critical evaluation of AI-generated content.

In contrast, **programming** was reported as the least addressed area by general subject teachers, predominantly remaining within AI or STEM pathways. The primary rationale for this divergence was the perception that such technical concepts are not uniformly applicable or equally critical across all content areas, especially those outside STEM disciplines. For instance, a world language teacher explained,

"My content specifically is more on the background side. We're not doing coding. We're not doing really anything with robots and not doing any of that. However, when you are learning another language, you're also learning pattern recognition, and when you're relating this language to another one, it's also pattern recognition and creating meaning from it. That's not working with a robot and coding a robot, but it's still that skill that you need in order to be a proficient user and ready for the future."

Many core content teachers approached AI integration as a pedagogical "mindset shift", wherein existing instructional practices were re-contextualized and explicitly labeled with the framework terminology to align with the initiative's objectives. A Language Arts teacher shared their pedagogical transformation in a shift of perspective:

"I think for me, it's more of a mindset shift. Initially, when [Seckinger High School] opened, we were all like, 'Oh my gosh! I'm a Language Arts teacher. How do I incorporate mathematical reasoning into my classroom?' But at some point, I really started to look at what that meant as far as mathematical reasoning. It's an equation.

So basically, I tell my students, 'Listen, you know we are doing an equation here. Here we're going to write this essay. You know, it's very formulaic…' It's just a mindset shift, but it is also a conversation that we are having daily with our students."

"When you think of integrating the AI framework and being future ready is helping students to understand that AI is going to be it's part of their life already, it's going to continue to be a part of their life. But that doesn't always mean there's going to be a computer in front of you. It's a whole way of thinking, because whether you're creating the AI or whether you're just utilizing it, you still need to be able to Understand that is helping speed up the process that you're doing and it's meant to just help enhance whatever you're doing that may be."

This pragmatic adaptation allowed teachers, especially non-STEM teachers, to incorporate the underlying reasoning and analytical skills inherent in AI, such as pattern recognition in language arts or computational thinking in mathematics and social studies, within the confines of established curricula and state standards.

Teachers Feel Supported to Innovate and Adapt

Teachers at Seckinger High School consistently described a strong sense of support from school leadership, particularly in relation to trying new instructional approaches and adapting the AI Learning Framework to meet the needs of diverse learners. This support has been instrumental in fostering a culture of experimentation and creativity.

From the outset, administrators made it clear that innovation would be encouraged—even when it involved risk or failure. One teacher recalled, "When we opened, our administration was really clear that we know we're trying a new thing and we know sometimes it might not work—and having that comfort was really important." This message helped create an environment where teachers felt safe to explore new strategies without fear of judgment.

Teachers also emphasized the flexibility they were given to adapt AI integration to their specific classroom contexts. One special education teacher shared how they initially struggled to imagine how AI could be used with students who had limited reading skills. However, with leadership support, they found creative ways to make it work: "That's the part where you have to have a principal and leadership that understands that every single class is not a cookie cutter."

This responsiveness extended to practical needs as well. One ESL teacher described how they received immediate support when AI translator devices didn't work with the school's Wi-Fi. The principal personally intervened to resolve the issue, reinforcing the school's commitment to ensuring all students could access the tools they needed: "If our students can't use the tools, what's the point? We're the AI school."

Teachers also appreciated the autonomy they were given to design and implement their own ideas. As one teacher put it, "They did allow us to have that creativity to make it our own." This combination of trust, flexibility, and practical support has empowered teachers to take ownership of their instructional innovation and tailor AI integration in ways that are meaningful and effective for their students.

AI Integration Can Challenge Existing Classroom Norms

Teachers at Seckinger High School are navigating the complexities of integrating AI tools into classrooms that have well-established instructional norms, such as in world language courses. In these classes, maintaining immersion in the target language is a core pedagogical goal.

However, introducing AI concepts and vocabulary—many of which are technical and unfamiliar—can disrupt this immersion. Teachers expressed concern about how to explain sophisticated AI-related ideas without breaking the target language norm. One world language teacher described the dilemma: "Our goal is to focus on the target language all the time, with an expectation to be 90% in the language." They wanted to be explicit about the AI Learning Framework, but doing so in English would undermine the comprehensible input and language production goals of the class.

To address this, teachers proposed developing a set of AI-related vocabulary terms in the target language. This would allow them to maintain immersion while still engaging students in meaningful discussions about AI. As one teacher explained, "We're going to need to teach them the words in the target language," so that students can participate fully in both the language and AI learning objectives.

This example illustrates how thoughtful adaptation is needed to ensure that AI integration complements rather than conflicts with existing instructional goals. It

also highlights the importance of cross-disciplinary collaboration to develop resources that support both content and language learning.

Depth of AI Integration Varies Across Classrooms

While all teachers at Seckinger High School implement the AI Learning Framework, the depth and breadth of its integration into classroom instruction varied. Teachers from the leadership team—including those in STEM pathways, humanities, and the arts—shared rich examples of how they are embedding multiple AI concepts into their teaching. These educators demonstrated a strong understanding of the framework and used it to reshape both their instructional strategies and their students' learning experiences.

For instance, one history teacher described how the framework has transformed their approach to teaching historical thinking. By applying the concept of algorithmic thinking, they encouraged students to view history as a system of inputs and outputs—where missing or misaligned "code" can alter the outcome of historical events. This shift not only changed the teacher's own perspective but also helped students better grasp complex historical concepts.

Another teacher emphasized the use of algebraic reasoning to help students make data-informed decisions. In one lesson, students analyzed the likelihood of success in the Confederacy's secession during the Civil War, using probability to understand the rationale behind historical decisions. This approach helped students connect mathematical reasoning with historical analysis, deepening their understanding of both disciplines.

However, these examples from the leadership team were aspirational to some other teachers. Many teachers reported that their use of the AI Learning Framework was limited to more general concepts such as ethics, problem-solving, and critical thinking, partially because teachers' misconceptions that AI integration "has to be something big" or because AI concepts were initially implied rather than explicitly taught. A world language teacher explained, "I know that I haven't been very explicit in it, but they need to be explicitly taught. Like in world language, we are using collaborative leadership all the time. We're doing the data analysis part of our framework because language is qualitative data. But [students] think of data as numbers." This variation suggests that while the framework is gaining traction, as with any major pedagogical shift, additional support over an extended period of time is needed to help teachers deeply integrate and explore the full range of AI concepts in their instruction.

Teachers Seek Deeper Professional Learning Beyond Conferences

Teachers at Seckinger High School expressed a strong desire to continue learning about AI integration, and many have pursued professional development opportunities outside the school, including attending AI and technology-related conferences. While they were initially excited about these opportunities, several teachers and teacher leaders reported that the sessions often fell short of expectations, offering limited new insights or practical strategies.

One teacher reflected on their experience, saying that many of the ideas presented at conferences felt basic compared to practices at Seckinger:

"Even when I go to conferences… I'm like, not to be mean, but we were doing this like three years ago."

This sentiment was echoed by others who felt that Seckinger's implementation of AI was ahead of the curve, noting that they feel like "we're building the plane as we fly it" and are willing to try new things. Teachers described attending sessions at conferences, hoping to learn from others, only to realize that their own practices were more advanced than what was being shared:

"We go to any conference or gathering ready to learn… but then also we're like, oh, we already knew that. So I think we're ahead of the curve… It actually ended up being a pilot because we are the pipe, we are the first."

These reflections highlight both the strength of Seckinger's internal expertise and the need for targeted, high-level professional development as teachers gain experience. Teachers are eager to deepen their understanding of AI integration, but they need learning experiences that go beyond introductory concepts and offer sophisticated strategies.

Teachers Need Time, Training, and Collaboration to Deepen AI Integration

While teachers at Seckinger High School are enthusiastic about the AI-Ready initiative, many expressed a need for more robust support to keep pace with the rapidly evolving field of AI. Specifically, they called for more professional development from the school district, more time to explore and implement new tools, and more opportunities for meaningful collaboration with peers.

Several teachers noted that their current understanding of AI comes largely from personal interest—such as listening to podcasts—rather than formal

training. One teacher explained, "I only know AI [concepts] from a podcast that I've listened to, or my own interest." They emphasized the need for training that treats teachers as learners of a complex, technical subject: "Just train us or teach us as if we were scientists or programmers… then we go back to our discipline and find a way to integrate that."

Others, the majority of teachers leaders in AI integration, highlighted the challenge of finding time to experiment with new tools and plan high-quality lessons. One of the teachers shared the struggle:

"We are the ones who develop, make, and present all the [professional learning communities], and we only have so many hours in the day. Every time we have to plan one, [the school leaders] have to pull us out of our classroom to give us time to plan together…It gets really difficult to make sure that we are pushing ourselves to have the right information and the most up-to-date information, because I can only share what I do and what I've heard."

The most consistent request was for more time—time to learn, time to collaborate, and time to process. One teacher summed it up simply: "The only support we need is the support of time. Just need time to play." Another added, "If you don't have time to think through your own immediate implementation, it's hard to."

Teachers also expressed a desire for more collaboration with colleagues who have deeper expertise in AI or computer science. They envisioned a model where teachers could learn from one another in structured, ongoing ways, rather than relying solely on external conferences or development sessions.

Resources, other than the teachers themselves, might help address these needs. For example, an AI coach that can work one-on-one with faculty to develop a concept into a lesson or specialized knowledge related to the discipline might be a good investment for some districts. In addition, if schools are located near universities, many faculty at colleges of education are interested in researcher-practitioner partnerships that lend the expertise of college faculty to support authentic applications and continuous improvement processes in the classroom. These collaborations have a secondary benefit of improving teacher preparation programs and the knowledge and skills of future teachers in the community.

Takeaways Related to Professional Learning and Culture of Empowerment

- Teachers consistently demonstrated a strong commitment to the AI-Ready initiative, viewing it as essential for preparing students with future-ready skills and fostering ethical AI engagement.
- While teachers felt empowered by the school's mission and supported by leadership to innovate, the depth of AI integration varied across classrooms.
- Some teachers also navigated tensions between AI integration and established classroom norms, adapting thoughtfully to preserve core pedagogical goals.
- Many teachers asked for more time, discipline-specific training, and peer collaboration to support meaningful implementation.
- For teachers who had developed expertise in AI, existing professional development was often seen as insufficient for advancing their AI knowledge and skills, prompting a desire for more customized learning.

Preparing Future-Ready Students: Student Experience and Learning

This section will discuss how students are using AI tools as part of their education. It will also share findings from the evaluation about how the AI-Ready pilot has affected students' experience and learning in school. Students who participated in the study represent the full spectrum of engagement with AI (i.e., from swim to snorkel to scuba), including those in non-STEM, STEM, and AI pathways.

Students Are Learning to Use AI for Analysis and Creation

Many students at Seckinger High School report that their school is helping them explicitly learn how to use AI—generating prompts, critiquing and comparing outputs, and creating original work. These experiences are helping students develop a deeper understanding of how AI functions and how it can be applied in both analytical and creative contexts.

One student described how comparing AI-generated feedback to human feedback helped them better understand the differences in reasoning:

"For me, I'd say, using AI and comparing it to how humans analyze things in my AP World [History] class and AP Human [Geography], we used AI to grade a paper and we compared it to how other people would grade it. And I really like seeing how, like, AI differs from how humans think. Yeah."

A smaller but still sizeable proportion of students report learning how to code and understand the algorithms underpinning AI to use and engage with it on a deeper level. Another student, enrolled in the AI pathway, shared a hands-on project that involved building and training a predictive model:

"I'm in the AI pathway, so we like a lot of stuff we do in that class is obviously related to AI. And last semester we actually created a model by—we used a Raspberry Pi and set up like a whole circuit and we collected data based off of that and like we had classmates come in and play the circuit. And then we made a predictive model based off of that data that we collected."

Students also explored how AI-generated code compares to human-written code in computer science classes:

"I guess one of my favorites was not necessarily this year but last year, I was in computer science and with a lot of coding our teacher wanted to see the difference between, you know, human code, human generated code and code from ChatGPT or other software. And I think what we found was really interesting—how like sometimes the

models could take more complicated approaches when it could be really more simple, and sometimes it just simplifies our own work, so, yeah, that was something really interesting to see."

Multiple students highlighted the AP Human Geography class as a strong example of interdisciplinary AI use:

"For example, my AP Human Geography class, we do things called AI case studies and what we do, we're given some kind of situation that we put in. So, for example, like we're looking at the relationship between obesity rates and location in the United States. And what we'll do, we'll use certain AI aspects in our lesson, so do like big data analysis. So we'll take, like analytical statistics from something like the World Health Organization on obesity rates. And we would put that on a map and then we would analyze the map and make our conclusion on that."

While some students reported that AI integration is not as thorough in non-STEM courses, they also gave examples of creative integration in specific non-STEM classes. In one literature class, students engaged with AI in creative and analytical ways. One student described a role-playing activity that deepened their understanding of historical texts:

"I really enjoyed my literature class. So what we did is during our unit on the March on Washington, it was there. We were reading a speech and one of our assignments was to have a conversation with AI. That was sort of role-playing Martin Luther King, right? And so we were supposed to see what he would answer to specific questions. And so we learned a lot about prompt engineering and how that sort of works. And then we also applied it to our current topic and it helped me get a better understanding of the text we read."

These examples illustrate how Seckinger High School is fostering not only technical proficiency with AI tools but also critical thinking, creativity, and interdisciplinary application.

Emerging Identities as Makers and Digital Citizens

A sizeable portion of students demonstrated a shift in identity, beginning to see themselves as makers and digital citizens. While only five students (13%) explicitly described themselves using terms like "maker" or "creator," a broader analysis of student responses revealed that 16 students (41%) described engaging in activities that involved creating or making. These ranged from building physical or digital objects—such as circuits, 3D cars, predictive models, or computer programs—to generating content with AI like images.

Students in AI, engineering, and robotics tracks reported the most hands-on experience with making and creating. However, interestingly, there was no clear correlation between students who described these experiences and those who self-identified as makers or creators. This suggests that while many students are engaging in creative, constructive work, they may not yet fully associate these activities with a broader identity as innovators or digital citizens.

One student offered a thoughtful and inclusive definition of what it means to be a creator:

"I would say just creating something that would overall help like your community or your society, not technically like something huge, but maybe it could be small like a… project or like not even just based… [on] programming…"

This perspective reflects a growing awareness among students that being a creator is not limited to technical expertise but includes the intention to contribute meaningfully to one's community. The AI-Ready focus at Seckinger appears to be fostering this mindset by providing students with opportunities to build, explore, and express themselves.

AI Use Supports Growth Mindsets and Personalized Learning

Several students at Seckinger High School described how their experiences with AI tools have contributed to a shift in how they approach learning, moving away from a focus on perfection and toward a more iterative, growth-oriented mindset. This shift is reinforced by both instructional practices and the nature of working with AI, which encourages exploration, trial and error, and reflection.

One student explained how they've become more comfortable with making mistakes and learning from them, especially when using AI tools to compare and refine their thinking:

"So since coming to Seckinger, I got more comfortable with not always getting high scores on my test because I feel like my teachers really emphasize that it is a learning process and so that if you don't make mistakes or maybe even fail, then you won't really learn as much as you would if you always got like 100."

When asked whether this mindset was influenced by AI or just the teachers, the student added:

"I feel like AI would also work with that, because sometimes like if you were to ask a

large language model like ChatGPT and you realize that you're wrong compared to what ChatGPT got, it's really like, oh, I see a different way on how they got this. And I really understand it better."

This example illustrates how AI is not only a tool for finding answers but also a partner in the learning process—one that can challenge students' thinking and help them see alternative approaches and gather different perspectives.

Students also expressed differing views on the role of AI in their education. Some primarily saw it as a study aid or source of information, while others viewed it as a way of thinking and engaging with the world—an approach that supports creativity, problem-solving, and deeper inquiry. This divergence suggests that while AI is being used widely, students' understanding of its potential varies.

One shared view from students who had attended other high schools before Seckinger was that it had a pro-technology orientation. Their teachers treated technology, not only AI, as a tool for deepening learning rather than something that should be avoided. Students explained that teachers at other schools were more likely to be concerned about AI use for cheating instead of integrating it to enhance learning.

Importantly, students noted that AI tools have enabled more personalized learning experiences. Rather than relying solely on whole-group instruction, students are increasingly able to explore topics at their own pace and in ways that align with their interests and needs. This flexibility supports differentiated instruction and allows students to take greater ownership of their learning.

AI Exposure Shapes Career Aspirations and Interest in STEM

The AI Learning Framework and pathway offerings at Seckinger High School have had a significant impact on students' career interests and sense of future readiness. A large majority of students—30 out of 39—reported aspirations for STEM careers, often citing their exposure to the AI Learning Framework and AI tools and concepts as a key influence. Even students who did not plan to pursue STEM fields expressed appreciation for the school's emphasis on college and career preparation, the variety of course offerings, and the availability of tracks aligned with their interests.

Students also described a sense of accessibility to STEM that they had not experienced in other schools. One student reflected on how the school's culture and curriculum made technical fields feel more inclusive and attainable:

"I definitely think we make that sort of stuff like those classes and AI more accessible to students…I feel like here anyone could do engineering. Anyone could do mechatronics…"

Many students reported that the AI focus helped them discover new career pathways they hadn't previously considered. This exposure, combined with hands-on experiences and interdisciplinary applications, helped students connect classroom learning to real-world opportunities.

Students also noted that when teachers explicitly connected lessons to the AI Learning Framework, it helped them better understand the purpose of their activities and the higher-order skills they were developing. However, this connection was not consistent across all students. Some students (15%), particularly those who transferred into the Seckinger cluster, expressed confusion about the AI Learning Framework or felt that its elements were too broad to be meaningful. Regular touchpoints on the goals of the framework might improve this element of student experience.

Additionally, a handful of students expressed a desire to go beyond surface-level AI applications like chatbots. They wanted to better understand how AI works, including its underlying logic and programming. Four students specifically requested more opportunities to learn coding or take a course focused on AI development.

These findings suggest that while the AI-Ready initiative is successfully inspiring students and shaping their career goals, there is room to strengthen the consistency and depth of its implementation—particularly in helping students understand the full scope of the framework and offering more advanced learning opportunities, if appropriate in high school.

Engagement with AI Ethics

While many students reported the Ethics element as the most common connection to the AI Learning Framework in lessons, their discussions around AI ethics tended to focus on personal responsibility, particularly the importance of using AI to learn rather than to cheat. This finding suggests that while ethical use is being addressed, it was most often framed in terms of academic integrity rather than broader issues of bias.

Only a few students brought up concerns related to bias in AI systems, and even then, their observations were typically limited to the accuracy or perspective of

AI-generated responses. For example, some students noted that AI tools sometimes provide incorrect information or reflect a single point of view, but they did not connect these issues to larger questions of algorithmic bias, data privacy, and the societal consequences of AI. This finding highlights the importance of explicitly including multi-faceted discussions about AI ethics when choosing to engage with AI tools.

Takeaways Related to Student Experience and Learning

- Students explicitly learning how to effectively use AI tools, including generating prompts and critiquing and comparing outputs, which helped them apply the technology to learning activities.
- Using AI helped students to be creators and makers by reducing the technical knowledge required to create solutions in their communities.
- Students viewed AI as a thought partner in learning, helping them discover alternative explanations and different perspectives, rather than relying upon a single narrative by the teacher.
- Students felt that using AI tools promoted a more growth-oriented mindset as they tested and evaluated different approaches with the tools.
- AI use and exposure may introduce students to careers that they were previously unaware of, make STEM courses seem more accessible, and increase students' interest in technology and STEM more broadly.
- Discussions of AI ethics should involve personal responsibility for appropriate use and larger issues related to algorithmic bias, data privacy, and societal impacts.

Conclusion

The AI-Ready pilot at Seckinger High School offers a compelling model for how schools can prepare students for a future supported by AI. Through intentional leadership, a shared instructional framework, and a culture of innovation, Seckinger has demonstrated that AI integration can be both transformative and achievable, including with diverse students and in diverse disciplines.

For other districts seeking to implement AI-readiness initiatives, several key lessons emerge:

Start with a clear, shared vision. The AI Learning Framework at Seckinger provided a common language and purpose that unified teachers across disciplines and grade levels. Whether adopting this framework or developing a local version, districts should prioritize coherence and clarity in their approach.

Invest in teacher leadership and professional learning. Seckinger's success was driven by empowered educators who had time, training, and support to experiment and grow. Districts should consider creating interdisciplinary teacher leadership teams and funding professional development that goes beyond introductory AI concepts.

Embed AI across the curriculum, not just in technical pathways. Seckinger's model shows that AI literacy can be cultivated in all subjects—from literature to world languages—by focusing on transferable skills like ethical reasoning, pattern recognition, and problem-solving.

Support a culture of experimentation and growth. Teachers and students alike benefited from an environment that encouraged risk-taking, valued failure as a learning opportunity, and promoted personalized learning. Districts should foster similar conditions to unlock innovation.

Center ethics and student agency. Seckinger's emphasis on human-centered AI use helped students see themselves as responsible digital citizens and creators. Expanding ethical discussions to include bias, privacy, and societal impact will deepen students' understanding and engagement.

Plan for sustainability and scalability. While Seckinger's pilot was intensive, many of its practices—such as onboarding, interdisciplinary collaboration, and community engagement—can be adapted to fit different contexts and resource levels.

Ultimately, the Seckinger pilot illustrates that AI-readiness is not just about technology—it's about cultivating mindsets, skills, and systems that empower students and educators to thrive in a rapidly changing world. By learning from Seckinger's experience, other districts can chart their own path toward meaningful, equitable, and future-focused AI integration.

Information about Researchers

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