Center on Inclusive Technology & Education Systems

Designing an Inclusive Technology Ecosystem Through Personalized Professional Learning

Baltimore County Public Schools (Baltimore, Maryland)

Challenge Question: How can districts design personalized professional learning opportunities to build teacher capacity in using accessible technology and digital assessments?

Baltimore County Public Schools (BCPS) in Maryland began the shift to a 1:1 technology implementation model six years ago to achieve its vision for student learning—that learning should be driven by accessible instruction for all students. This instruction reflects high expectations that is culturally responsive and uses educational technology rooted in best practices. Although the district prioritized moving to a 1:1 model for all students, the leaders noted that technology integration brought to life a "district vision of student learning and high-quality teaching . . . it's about how we learn and how we teach and not about a tech tool."

BCPS created collaborative **leadership structures** within an inclusive technology ecosystem with the Department of Educational Options (which includes the educational technology [EdTech] and assistive technology [AT] departments). The EdTech and AT teams worked closely with the Department of Information Technology [InfoTech] to design a personalized professional learning program focused on moving beyond device access to rethinking the district approach to teaching, learning, and assessment.

District Facts

- BCPS is the 25th largest school system in the United States and the 3rd largest school system in Maryland.
- Approximately 115,000 students are enrolled in BCPS.
- 13% of students receive special education services.
- 7% percent of students are English learners.
- 49% of students are economically disadvantaged.

Setting the Stage

Prior to COVID-19 and the resulting school building closures in 2020, BCPS had implemented its 1:1 technology model in Grades 3–12. As schools moved to virtual instruction, students in Grades 3–12 were able to transition smoothly into a virtual learning experience. In contrast, devices had not yet been assigned to K–2 students, and the district had to accelerate its timeline to deploy devices to these younger students. The district benefited from the **planning** and preparation of prior years to disseminate devices and implement virtual instruction that was grounded in the districts' **vision** for technology.

The district adopted the ISTE (International Society for Technology in Education) Standards for Students, Educators, and Coaches to guide the district vision and drive capacity-building efforts for teachers. The district grounded its approach to change in a belief that changing teaching and learning to become more collaborative would support the natural integration of technology in the classroom. As the curriculum shifted to become more creative, generative, focused on problem solving, and encouraged students to "fail forward" and develop a growth mindset, technology tools were integral in supporting this new way of learning. To build teacher capacity in alignment with the ISTE Standards for Educators, BCPS focused on building a sustainable system of professional learning that modeled these teaching strategies. BCPS provided personalized professional learning opportunities grounded in adult learning principles that met staff where they were and offered ongoing supports to encourage continued growth.

How Instructional Practices Laid the Foundation for Success

In discussing instructional practices (encompassing teaching, learning, and assessment), BCPS leaders stressed the critical role of collaboration across divisions when creating a more inclusive technology ecosystem. Divisions across curriculum and instruction, AT, EdTech, and InfoTech work together to identify solutions to meet the needs of a diverse range of students. Their work is supported by the Office of Digital Safety, Educational Technology & Library Media leveraging knowledge and expertise in technology tools, digital accessibility, student-centered learning, and mastery-based teaching strategies. The AT department staff work directly with the special education department to provide consultation and support for students who need specialized or dedicated AT devices to ensure access to the curriculum. This collaborative approach is reflected throughout BCPS's professional learning opportunities, with a focus on building teacher capacity to use digital teaching, learning, and assessment practices to drive personalized, customized, and student-centered learning.

BCPS leaders noted that these changes in teaching, learning, and assessment did not happen overnight and were the result of years of planning, piloting, and refinement of coaching and professional development models with early adopter schools (Lighthouse Schools). BCPS began by identifying 10 elementary schools (out of 176 schools) to serve as pilot Lighthouse School sites. To become a Lighthouse School, school building leadership teams were required to complete an application and demonstrate an existing school culture grounded in innovation and risk taking. Each Lighthouse School had the opportunity to try out the technology tools being considered for districtwide adoption, receive coaching and instructional design support, and collaborate on the design of necessary changes to pedagogy and infrastructure. As district technology leaders collected data on what worked well and what did not work well, they continuously refined their plans and professional development offerings. After initial piloting with elementary schools, BCPS expanded the Lighthouse School model to a select group of middle schools and then to high schools. At each stage of development and testing, district technology staff were building strategies for job-embedded, capacity-building activities for teachers, using data and lessons learned to drive a process of **continuous improvement**.

Lessons Learned From the Lighthouse School Model

- **Build voice and choice into professional learning.** After the Lighthouse Schools initiative, professional learning in BCPS shifted to focus on meeting staff where they are and on providing support for planning and implementation. The district allowed staff to design and select their own learning pathways and provided a mix of "technology 101" type courses, as well as offerings that addressed more advanced users.
- **Eliminate "sit and get" professional learning** and focus on more engaging and personalized options, including conference style learning and individualized coaching.
- **Bring together full faculty teams to look at assessment data together.** BCPS found value in ensuring teams had the time and support to examine data, plan next steps for implementation, and discuss pedagogical shifts needed to support technology integration.
- **One-size-fits-all professional learning does not meet teacher technology needs.** With a large and diverse teaching staff with varying levels of technology expertise, BCPS leaders recognized that professional learning must be personalized, choice based, and provide targeted supports to meet the learning needs and goals of all teachers.

Developing Teacher Capacity to Use Technology to Support Student-Centered Learning

The district offers several professional learning opportunities to build teacher capacity and comfort with technology integration. In particular, the district has developed an Innovation Academy to allow teacher voice and choice in professional learning. Through the Innovation Academy, educators select professional learning topics based on their personal interests and professional needs. Educators receive credit upon completion of five online, self-paced modules and a reflection activity for each module. They are encouraged to design their own learning pathways aligned with the specific instructional needs of their students, as well as their needs as an adult learner. In addition to providing these optional professional learning modules, BCPS develops and facilitates centralized professional learning for all staff to reinforce the purpose of digital learning tools in improving access, support instructional design skills, and build awareness of accessible technology tools available to support learning.

As teachers built their skills and comfort with technology, they began to contribute to the selection and evaluation of technology tools for district vetting and approval. A district-developed flowchart Evaluating Web-Based Tools for Instruction supports teachers to become a part of the process, allowing Office of Digital Safety, Educational Technology & Library Media staff to serve in a coaching role regarding instructional design and tool selection. School-based instructional coaches provide additional coaching in EdTech and AT. These coaches support the planning and preparation process with teachers as teachers shift from viewing technology tools as objects to a deeper understanding of how technology can be embedded in their instruction to best meet student needs.

Professional learning opportunities have focused on building a foundation of information and support for AT and accessible technologies to meet student needs and reduce barriers. The district makes certain accessibility and AT tools universally available for students; the AT department has collaborated

with EdTech to support this integration and provide professional learning on instructional design and planning. Coaching and professional learning on accessible technology tools reinforce the district view that universally available accessibility features are an equity driver. Coaches work closely with educators to think about how they can provide the tools that support student learning and access and how they can plan to make the learning environment more equitable for all students. This collaboration between AT and EdTech within BCPS required a shift in the district's perspective on AT. Rather than focusing solely on separate devices and planning for students with disabilities, the district team has worked to build an integrated and seamless approach to supporting students through the purchase of technology with built-in accessibility features, woven together with AT services for students requiring more specific features and devices.

Active Engagement in Flexible, Accessible, Collaborative, and Relevant Learning Opportunities

When BCPS began its shift to 1:1 technology access, the goal was not to be a traditional "1-to-1 district"; instead, the plan was to create ways for students to be creators and makers, with device access a piece of achieving that goal. As such, the district did not focus on technology integration as a primary avenue but began with a focus on changing pedagogy with technology tools as a critical element in supporting innovative approaches to student learning. The district believed that, by focusing on changing teaching and learning to support more personalized and authentic learning and the development of growth mindsets, the shift to technology integration would offer a natural way to achieve those learning goals. District leaders shared that this model made technology integration an imperative—as the curriculum changed to become more creative and generative, bringing in technology tools became a supplement for what the students were already doing.

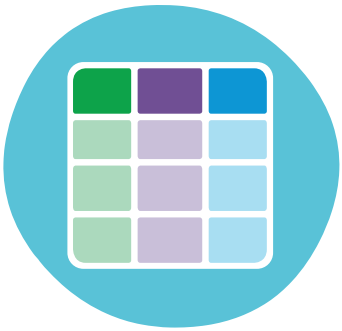
As part of this strategy, BCPS focused on designing instruction that would provide opportunities to empower students and encourage them to be active agents in their own learning. Professional learning opportunities for educators feature extensive modeling of what engaged, empowered, and authentic student learning supported by digital tools looks like in practice. These professional learning opportunities included highlighting how to help students make meaningful connections to content, as well as ideas and strategies for student check-ins and scaffolds to support students becoming more self-regulated and independent learners. District tools and content are designed to support these learning goals through providing multiple ways to access and engage with content, responsive to specific learner needs, including providing instant feedback through collaborative documents and video conferencing, supporting just-in-time access to embedded accessibility tools, and using ongoing data collection to guide instructional decision making.

BCPS leaders shared that their focus on a collaborative instructional design process helped teams identify and articulate what is being taught, why it is being taught, and for whom it is being taught. This focus on planned and intentional technology-based instructional design supports more efficient and inclusive course set-up and prioritizes design that students can navigate independently. This approach allows the students to become leaders of their own learning processes. The district has found that this learning structure has helped to challenge students to acquire, develop, and demonstrate their learning

in a variety of ways, using the tools and supports that they need and representing their understanding through a variety of creative tools.

District leaders acknowledged that helping students become leaders in their own learning is a process that requires ongoing support for teachers, families, and the students themselves. This support enables staff to help students understand their learning needs, the tools and accessibility supports available to them, and how to select the best tools for the task at hand. This process helps to transfer ownership of technology selection from the teacher to the student and encourages students to make choices in tools and resources to facilitate their learning.

Educators Design Inclusive and Accessible Assessments



BCPS uses the LMS and a variety of digital assessment tools to support data collection to personalize instruction. The district uses these assessments to provide teachers, administrators, and district leaders with real-time feedback on student performance toward learning goals. To ensure that all students can demonstrate what they know and understand, BCPS brings the **UDL (Universal Design for Learning) approach to teaching and learning** to the design of assessments, offering students multiple means to demonstrate proficiency and built-in accessibility features such as text to speech and options for recording audio responses. Leaders shared that they spend time working across teams to strategize for students who "live outside the access points" and explore how to engage and "pull in" students through adapted assessments and learning experiences to ensure that the depth of knowledge for all students in the district is accurately measured.

In shifting to these tools, BCPS devoted significant professional learning time to build teacher capacity in use of the available assessment tools and daily formative feedback to inform instructional design and practice. The Office of Digital Safety, Educational Technology & Library Media created a variety of professional learning options, including self-paced modules, large-group instruction, synchronous and asynchronous opportunities, and classroom-embedded coaching, to ensure that teachers have the skills to effectively evaluate student learning and provide constructive, timely, and relevant feedback. The district leaders shared that the LMS enabled them to see how students navigate through the curriculum in real time. The LMS has been a critical support for teachers in harnessing data to inform their instruction, including how to look at the whole data story—beginning, middle, and late year—to help them better understand student learning needs and provide actionable feedback to learners. Interviewees underscored the criticality of immediate access to data: "It doesn't help for teachers to get the data six months later; they need real-time/just-in-time access" to student data.

IDEAs that Work U.S. Office of Special Education Programs
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