Educational Technology Integration

Two Success Stories

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Contents

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Introduction

US schools face a daunting challenge: How do they prepare sustainable programs that engage students and prepare them to thrive in a high-tech society given that budgets are limited, inputs costly, and demands on teachers increasingly complex. Meeting those challenges was the focus of a recent webinar hosted by Curriculum Pathways® and SETDA: Two Stories of Successful Educational Technology Integration. The principal participants were West Virginia educators from districts that exemplify successful technology integration and digital content:

> ▸ Leah Sparks, Executive Director of Technology at Kanawha County Schools, the largest district in the state. Kanawha County has implemented a 1:1 iPad initiative.

> ▸ Chris Urban, Director of Technology and Communications at Monongalia County Schools, the sixth most populous district in the state. Monongalia County has implemented a 1:1 Chromebook initiative.

The educators devoted particular attention to avoiding what Evgeny Morzov calls "technological solutionism"—the notion that merely introducing technology into the classroom will, like a magic pill, produce beneficial results, as if concerns about content, pedagogy, planning, training, and leadership were of minor or secondary importance. The speakers make clear that not only are these concerns central, but that avoiding them produces programs that squander resources, time, public confidence, and—most importantly—student potential.

Both Sparks and Urban call attention to what Gavriel Salomon calls the dangerous confusion between careful technology integration— "the pervasive and productive use of educational technologies for learning and teaching purposes"—and the "misplaced and misconceived … and often spectacularly foolish" notion that technology alone can serve "as a vehicle of educational reform."

Moderators Lee Ellen Harmer, Outreach and Collaborations Manager at Curriculum Pathways, and Melissa Green, Director of Strategic Partnerships at SETDA, helped frame the discussion by identifying key components of successful technology integration as schools navigate the digital shift.

Building a Sustainable Foundation

Building a sustainable education technology program—one that will prove effective year after year—requires a good deal of foreground planning and consensus building. Too often insufficient preparation causes programs to founder. Sparks and Urban summed the antidote to this problem in two memorable phrases:

> ▸ Know your why.

> ▸ Know your who.

The first of these bedrock principles concerns setting clear goals— knowing why you are doing what you are doing—and getting buy-in from parents, teachers, and administrators. Without these common goals, without a shared sense of a specific mission and vision, technology integration programs are doomed to fall apart at the first sign of friction. And with a challenge this complicated, friction is sure to occur. Programs based on a confused sense of purpose, in which each participant seeks a separate ideal, inevitably waste resources, produce philosophical stalemates, shortchange students, and fail to achieve long-term success.

"Running a technology integration program is not like steering a speedboat," Sparks says. "You won't be able to make sharp turns as you try to clarify where you are going. The process is more like steering a large yacht. So you need to know where you're going before you start moving. You need to build a consensus before you begin."

Regarding the second bedrock principle, Urban emphasizes that buy-in from students is also crucial—especially when making hardware and software decisions. "Don't just assume you know what devices students will want," she says. "We asked specific questions—and got some answers that surprised us. We found, for example that students did not want to work with a tablet, but preferred a device with a keyboard. That information ultimately led us to develop a program built around the Chromebook. Had we ignored student preferences, we'd have gotten off on the wrong foot, with no simple means of correcting our mistake."

Cost is another crucial bedrock issue: Can you afford a 1:1 program? Neither Sparks nor Urban come from wealthy districts, so innovative approaches to long-term financing were crucial to their success. The first key to efficiency grows out of the principles outlined above: if you have clarified your why and your who, you can cut any outlays that do not specifically advance your mission.

The second involves making the most of limited funds, and one of the best ways to do that, Sparks says, is by leasing resources. "We couldn't raise the $14 million we'd have needed to buy equipment, but we could raise the $2.4 million we needed to lease it. So that's the route we chose. And that decision has enabled us to build a truly sustainable program, one in which we stay current on the rapidly changing features and products in the education technology market."

Urban also emphasizes that infrastructure—both technical and human—is crucial to long-term success: "We started years ago, upgrading all the routers and switches, the cabling, and so on. We wanted to make sure that we had access points in as many classrooms as possible, with the goal of one access point per classroom."

She adds that schools may need to start small and—driven by a common goal—move toward greater and greater sophistication: "Early on, when something went wrong, about all we could do was check to see that the cables were plugged in. Seven years ago we may have had one technology integration specialist for every two or three schools. This year I have one at every school."

Engaging Students with Effective Content

Sparks and Urban both agree about the goals of their educational technology programs: preparing students for ever-changing college, career, and global opportunities. They want students who are problem solvers, critical thinkers, communicators, collaborators, and creators rather than automatons who simply memorize and recite facts.

"Our focus has always been on learning," Sparks says. After all, we didn't name our initiative Technology 20/2O; we named it Learning 20/20. That's where we want to focus our clear-eyed vison for the future." She drove that point home with a telling analogy: "We look at technology as a tool. It's almost invisible. In the past, educators didn't go around ranting about pencils and paper. So we shouldn't lose our focus by fixating on technology per se rather than on technology as a means to an end. We need to be talking content that stimulates critical thinking."

"We want to engage students," she adds, "not in a way that they are merely entertained—but engaged in complex thinking. We don't want them engaged because an iPad is fun. We want them engaged in the actual learning."

In clarifying what she looks for when selecting digital content, Urban used Curriculum Pathways as an example. "We've used

Curriculum Pathways for a long time," she says. "And what we've found is this: the lessons are quality. And they are already aligned with our state standards, so we don't have to vet them. The materials are differentiated, so they help teachers reach a wide range of students—with varying abilities and learning preferences. They simultaneously engage students and promote critical thinking. They encourage active learning. And Curriculum Pathways is free—and free of ads."

Sparks expands on these points with an anecdote: "Recently I went to a seventh-grade world history classroom. And if you've had the experience of teaching seventh graders, you know that they are hard to keep engaged and excited about learning. On top of that, the teacher told me, 'This is the most diverse group of students that I have.' There were gifted students, special education students, and kids with a wide range of personalities and backgrounds. The teacher was using a Curriculum Pathways lesson on Mesopotamia. And what I saw were multiple activities—some interactive, some involving video, some led by students."

"But here's what impressed me most: these materials reached the needs of all those students. And I could not distinguish the gifted students from the special education students, the introverts from the extroverts, because ALL the students were so engaged. That says a lot about Curriculum Pathways—and about the kind of resources I look for to help a program succeed."

Rethinking Professional Development

Urban emphasizes that reliable infrastructure and first-rate content are necessary but not sufficient conditions for program success. Just as a surgeon is not empowered by a high-tech instrument she has never used prior to entering the operating room, neither is a teacher likely to succeed without the kind of high-quality professional development that produces innovative pedagogy.

Sparks points out that schools ignore this component at their peril: "You need to spend as much on professional development as you do on devices. I say that because you can throw technology, resources, and money at a classroom—and do nothing to improve instruction. It's professional development and support for the teacher that ultimately bring about improvements."

And it's not just professional development per se that is crucial: "We've stopped doing all the pull-out training where you bring everybody to one location," Sparks says. "We just weren't getting the results and change we needed. So now we take professional development to the schools."

"When we shifted to spending our training money on having people come to work with the teachers, we started to see benefits. Our trainers now meet with teachers during their planning time, and they co-plan a lesson. Then they (i.e., the trainers) come back in a week and either co-teach, model the lesson, or simply attend class to provide support."

The paradigm shift here is the recognition that, when it comes to learning, students and teachers have a lot in common: "We also work to provide differentiated support for teachers. Like students, teachers aren't all at the same level. They too learn at different paces and in different ways."

Urban concurs: "Our teams of academic coaches and technology integration specialists help teachers build lessons to meet specific standards and to figure out the technology pieces they want to use. Sometimes this involves modeling or co-teaching a lesson. This is a much more effective system: We're driving instructional change with our teachers because they feel supported."

The practical impact of that shift is difficult to overstate—as measured by what Sparks calls "ah-ha" or "eureka" moments. She cites the example of a teacher one might (charitably) call a "reluctant adopter" but whose attitude underwent a dramatic shift when she simply observed the impact of the new technology-enhanced lesson on her suddenly engaged students.

Her response? "Oh my gosh … I just have to give up control.'"

Sparks points out that this kind of change simply would not have occurred in the abstract confines of an old-fashioned training session: "The key was that this insight occurred in her classroom, in front of her students, with the help of my technology integration specialist. Had she received generic training in a room full of teachers, she would not have had this 'ah-ha' moment. So we really need to think about how we provide support for our teachers and make the experience differentiated and meaningful. That's when you're going to see real change."

Notes

Morozov, E. (2013). To Save Everything, Click Here: The Folly of Technological Solutionism. Perseus Books: New York.

Salomon, G. (2016). It's Not Just the Tool but the Educational Rationale that Counts. In: Elstad E. (eds) Educational Technology and Polycontextual Bridging. SensePublishers: Rotterdam.

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