Going Toe-to-Toe for One-to-One

An Interview with NYIT’s Stan Silverman

Stan Silverman—Director of Technology Based Learning Systems at the New York Institute of Technology—is often referred to as a “pioneer” and “guru” in distance learning and educational technology. And while the self-effacing Silverman is prone to shrugging off the accolades that his tenure has earned him, he—in this case—chooses to merely reframe the assertion.

“A pioneer is someone that has been doing something for a long time,” Silverman explains. “A guru is someone who just has a loud enough voice and a platform to address a particular problem…so, I guess within those definitions, sure: I’m a pioneer and a guru!”

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“Teachers know that I don’t have an axe to grind, and that I’m not aligned to any specific vendor or platform,” he explains. “For me, it’s all about ‘How does this technology best enhance education for kids?’ Vendors know that I’m only their friend as long as they deliver the best educational experiences. The minute they aren’t delivering top-notch solutions, I’m looking elsewhere.”

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This learning-centric viewpoint emanates from Silverman’s experiences as a teacher, having taught in high needs school districts with limited resources and teaching other teachers. These experiences are why he views technology as a prosthesis, of sorts: a tool that empowers both teachers to teach and students to learn in better ways.

“Technology has the potential to enable education to get where all of us want it to go: helping to create a citizenry that is educated to fully function in a democracy. The latest term for this is ‘college-and-career ready.’ But the reality is an educational system that helps produce fully functioning citizens.”
Giving Students Access to Opportunity

The New York Institute of Technology strives to be a leader in the application of technology in the institution’s laboratories, facilities, and classrooms. The Office of Information Technology and Infrastructure provides the necessary leadership, innovation, planning, and support services in this area: working closely with NYIT’s Center for Teaching and Learning, Technology Based Learning Systems, and other units to support and promote the effective use of 21st Century learning technology.

As Senior Professor of Education at NYIT, Silverman spends a good part of his day strategizing on how to best enhance the knowledge- and experience-base for educators teaching in today’s classrooms. As part of this work, he often interfaces with education technology vendors: seeing if their products are a good fit for certain education scenarios and—if not—provides guidance on how these products could be improved to enhance the educational experience, as well as advise on how vendors can navigate New York State’s complex purchasing environment. In addition to these tasks, Silverman and his staff also coordinate NYIT’s robust online programs.

“People say I often wear multiple hats…in fact, I wear so many that I feel like I own my own hat store: marching down Fifth Avenue in an Easter bonnet, most days!” Silverman says with a laugh. “My staff and I work on pushing the envelope regarding how far we think the technology can go. Sure, we’ve experienced our fair share of noble failures, but sometimes we push that envelope really far. Whether a technology or initiative works or not, we learn from every one. We recently built a 23 foot-long vehicle focused on STEAM education that travels from school district to school district as well as makes appearances at community events. Everyone seems to want it at their school to demonstrate the capabilities of STEAM education and what it takes to get kids engaged.”
Why the Next Best Thing Might Be the Worst Thing for Schools

While Silverman has seen many successful implementations and migrations during his tenure, the “noble failures” he refers to generally share similar characteristics. The first is a failure to understand the implications involved with the deployment of a specific ecosystem. The other is the failure to put in a sustained professional development strategy as a school or district’s professional development support must be continuous and adaptive: educating teachers in the same continuous and adaptive way they educate students.

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“By jumping to the glitter—the shiny ‘next best thing’ touted by the press—without understanding that there are major shifts required by certain ecosystems, then you are setting yourself up for frustration,” Silverman explains. “Then there’s professional development, which is often ‘Here’s five hours of training and now go with God!’ It’s probably good going to church first! Technology implementations depend on human beings, and human beings need to marinate in their environment and receive constant support. Another thing is that most professional development is targeted to the top 20%: the ‘pioneers and gurus’ within their own districts. But the reality is that the other 80% need the largest degree of support. We have to develop a better strategy or we won’t be able to lift the whole district.”

According to Silverman, school leaders need support in how to be change agents in making 1:1 a viable reality for schools and districts. And, unfortunately, he feels that no one is really providing these leaders with what they need to bring about meaningful change: educating superintendents, IT staff and administrators in the best practices necessary, for instance. Another concern, from Silverman’s perspective, are implementations built on consumer devices: devices that are initially created, developed and supported as personal devices. This situation, he says, leads to issues such as those posed by multiple users whom can’t utilize the same profile and therefore must have individual apps. This could be a significant cost factor for a district, essentially forcing them to go to 1:1. And then there is the issue of managing consumer/personal devices, which can be a drain on IT time and resources, and often results in jerry-rigging. Another issue is the sharing of data between and amongst apps, which can be very difficult if personalized content is involved.

“Look, this great app can do x, y and z in education: but, to make it work, you need a Swiss army knife solution,” Silverman says. “Certain platforms make this very difficult to do and manage: and if no one is on top of management, you’re going to have a failed implementation. Then there’s the issue of competition. If you have a system driven by a single company there’s no benefit of a competitive environment. That in and of itself is a major failure: there’s no incentive to incorporate and merge emerging education strategies.”
Left To Your Own Device

In terms of school- or district-wide workflow and collaboration, it all comes back to the individual device. Consumer devices, according to Silverman, are not fundamentally designed to be part of a collaborative environment. Rather, they are designed to be an individual’s device. There are indeed ways to make these devices part of a collaborative environment, but it requires time, expertise, and patience. Plus, these workarounds can create resistance points with teachers and administrators who are already strapped for time or lack the necessary technical knowledge to overcome workflow or collaboration challenges.

Silverman’s experience has given him the insight to gauge how successful an implementation might be based upon the amount of buy-in or planning for professional development there is at the onset.

“We want our students to be successful with this, so they have to think through the steps—the process of how implementation works—and then have an associatively robust professional development system. If they don’t do that, we will encounter failure. I’m not worried about reaching the high-performing teacher and getting them ramped up with the latest education technology. I’m very worried about those teachers that are skeptical in beginning and are reacting negatively to implementations. That’s what keeps me up at night. I heard from teachers in one district that didn’t want to roll out computers in their classrooms because they didn’t want to look foolish in front of their students. This is a long way of saying, when you have an absence of buy-in or if you don’t have a strategy that reaches deeply in the art and act of teaching, you have a failed migration. Districts also might wind up with zealots of a certain platform, but if the district moves to another platform, you create this anti-group. You have to think of ways to engage these people so that they can help lead the charge and not—instead—be anchors to change.”

A Formula for Success

A simple formula for successful implementations is to begin with a thorough knowledge of student needs and to identify the resources students and teachers require to meet the challenges of education. Then schools and districts need to explore what technology solutions would best support students and teachers while establishing cost factors. Ed-tech decision makers find it useful to divide device requirements into distinct levels: entry level (such as kindergarten and early elementary use—which tends to be mainly about consumption and light interaction—in which tablet devices make the most sense); middle (such as late elementary and middle school, where new strategies and skills need to be developed, requiring either laptop or hybrid devices); and advanced (such as high school, which requires power-computing and the ability to do sophisticated tasks and projects such as coding, in which devices with keyboards are essential).

Regarding learning devices and platforms to answer these requirements, Silverman has no shortage of opinions.

“We’re seeing devices in the Windows environment surging forward,” he says. “Districts are comfortable with them, they understand them, they understand how security works, and they understand how to upgrade and maintain these devices. Then there are high-powered Chromebooks. The low-powered ARM-based devices were something of a black eye: setting us back fairly substantially. People were immediately encountering a case of ‘What do you mean I only have this amount memory?’ Plus they could be incredibly slow. With the adoption of Intel-based Chromebook devices, we’ve seen a surge of interest. The power and function have risen dramatically. Kids can actually take the devices home and use them successfully.”
All Together Now

The reality in modern schools—according to Silverman—is a hybrid approach: not one-size-fits-all. A district that has already invested in specific devices is unlikely to put those devices in the storage closet.

“You fought the school board, you made the case to your community, and you don’t want to say ‘Hey, these devices didn’t serve the purpose we thought.’ It’s better to put these devices in places where they make sense. It’s very common, for instance, to have iPads in classrooms while teachers are using Microsoft devices. That’s why IT directors are so concerned about iPads, because they don’t fit in their ecosystem: requiring them to hire new people to make sense of it all. It comes back to Total Cost of Ownership: what does this do for me, what does it do to me? You have to keep in mind all of those support people and work-arounds you need in order to work with your ecosystem.”

At the end of the day, Silverman isn’t interested in promoting a Chromebook versus a tablet, or advocating for one platform versus another. All he wants is for schools and districts to have the right tools for their unique needs. Companies can help by pushing their differentiating factors forward and contextualizing these factors within real education activities. By presenting devices as solutions not “saviors,” today’s schools and districts can better bring about the promise of 1:1 computing.

“Why should schools go 1:1?” Silverman asks. “Why should students have pencils!? Devices are now a critical component of our educational system, and if we don’t provide technology and equality for all students, we will further create silos in schools for kids who have access and those who don’t. I didn’t get in the education technology game to create ghettos of technology. I want all kids to be able to excel to the best of their abilities: and every one of them needs a powerful, education-friendly device for that to happen.”