My journey into mobile learning started in 2008 and centered around two events: a conference I attended that explored mobile devices and cloud-based solutions and my simple investigation into what my own children and their friends were doing with their technology devices.

The Convergence of Mobility and Cloud-Based Solutions

The event that gave me my first glimpse into the possibilities of mobile learning was a two-day Microsoft Public Sector conference focusing on mobility and cloud-based solutions.

At this conference, mobility focused specifically on enabling the workforce to access information pertinent to their work processes anytime, anywhere. At the core of this concept were mobile devices and the facts that these devices needed constant connectivity to the Internet and access to applications outside the traditional business network.

The major focus was on cellular devices with discussions and presentations targeted at two specific areas in the cellular market. The first area was the change in the functional paradigm regarding the perceived use of these mobile devices from simply communication tools to productivity devices on which actual work could be
accomplished. The second area comprised trends and predictions for the mobile market, including market growth, device evolution, and application and functionality evolution.

Cloud solution presentations focused on the costs and benefits of moving to the cloud. Discussions helped the audience frame the return on investment (ROI) model, outlining the considerations and factors making up the ROI calculation. Also discussed were what services and functions could be moved to the cloud.

At this event, I started to understand at a deeper level how mobile devices—with their ability to access cloud-based solutions anytime, anywhere—were going to be a game changer. Mobility and cloud-based solutions meant actual universal access to resources and information without being tethered to an organizational network or device. The organizations considered were from private and public sectors, including higher education. Interestingly, K–12 education wasn’t discussed. I wondered, why couldn’t this be a game changer for K–12? Although the presentations and discussions focused on the business side of operations, I could easily correlate each discussion to an educational setting. On a philosophical level, the idea of teachers and students using mobile devices to access instructional resources made a lot of sense; however, I found a lot of gaps as I started to apply this idea to a real K–12 education system.

The cloud-based solutions discussed were from an infrastructure standpoint (such as file server, storage, application, and email), which were relevant to everyone in the public and private sectors. But how many cloud-based instructional resources or teacher/student collaboration tools had been developed? A game changer for education in KISD would be providing anytime, anywhere access to resources, such as instructional content, instructional tools, information, and educational applications to all of our stakeholder groups. The problem was that access to these various resources was limited to district devices accessing our internal private network or to a specific group of district employees via some type of remote-access software package. Not exactly a game changer because most organizations had remote capabilities already, and it didn’t accomplish the anytime, anywhere
How My Mobile Vision Began

Chapter 2

Bring Your Own Learning

1.800.336.5191 or 1.541.302.3777 (Int’l), iste@iste.org, www.iste.org. All rights reserved.

Copyright 2014, ISTE ® (International Society for Technology in Education), Bring Your Own Learning, Lenny Schad.

concept for stakeholder groups beyond a select few employees. The power of mobile devices and cloud computing was extending the boundaries of our internal resources and not limiting the devices that could access them. It was then that I began to formulate my concept of mobile learning.

If we could put instructional resources out into the cloud—allow students to store their files in the cloud, get their email, and, most important, do their homework with tools in the cloud—we would have the foundational layer in place allowing for anytime, anywhere education.

I remember coming back from the conference and attending the superintendent’s cabinet meeting Monday morning. Of course, the first question asked was how was the conference? I remember my response to this day. I told the cabinet, based on what I was exposed to at Microsoft, the next five to seven years would be the most transformational years K–12 education has seen in decades. Mobility and cloud-based solutions would transform and redefine the traditional classroom and class-day paradigms.

In my opinion, this transformation wasn’t an option. As a K–12 school system, we had two choices. We could blaze this transformational path, or we could wait for the trail to be established and follow. Now, the problem I had with waiting for the trail to be established was that we would forever be behind. In some instances this is absolutely the right decision. However, in this particular case, I didn’t want to wait, and KISD chose the trailblazer path.

Those educational institutions embracing and implementing this new philosophy, I felt, would have a huge educational advantage when it came to preparing their students for life in the digital world. This educational advantage would create competition among the various K–12 institutions. Parents who had the option would move their children to those institutions providing this new way of educating. The main point here is that mobility and cloud-based solutions had the potential to change the school day, the learning opportunities, and support infrastructure available for teachers, students, and parents. We in K–12 education could not ignore this opportunity. To do so
would be an injustice to our students, who will live the rest of their lives in this new digital world.

**Students Are Already Connected**

When I was considering a mobile learning strategy, I realized the benefits of implementing cloud-based resources were predicated on anytime, anywhere access from some type of untethered device. As I struggled with the device piece of the puzzle, the answer started to emerge by simple observation—watching my own children and talking with their friends.

In 2008, my daughter was a senior in high school, and my son was a freshman in high school. After I came home from the Microsoft conference, I began to watch my kids, observing how, what, and why they used a certain type of technology device. We have all heard and seen fun facts about digital natives, so I won’t rehash their working parameters. The fact that you are reading this book tells me you have a good grasp of who they are and what they are looking for. It was interesting, though, watching my children doing homework. The only technology devices they had were cell phones and laptop/desktops. The most frequently used device during the homework cycle was the cell phone. Now, I am not foolish enough to believe the activity occurring on the cell phones was all about the school work, but when my children were working, texting and accessing information online were major components of how they were completing assignments. These devices provide opportunities for the children to collaborate and to verify and seek out information.

The laptop was used, too, but only as the device to type on and maybe access the Internet to do some research. I started to pay closer attention to how and for what purpose the cell phones were being used beyond talking or texting, not isolated specifically to education. I discovered the devices were being used to access the Internet, update social networking sites, collaborate, email (rarely), take pictures, research, and create videos, among many other uses. Now, how many of those things that I just mentioned could be used in a classroom
setting? The really interesting thing was, given the choice and availability of their cell phones or laptops in their social lives, my children unanimously chose their cell phones.

It was at this point I wanted to go beyond the walls of the happy Schad family and see how the devices were being used with a broader audience. I began to watch kids’ use of technology devices when we were at social events, the movies, dinner, or any other gathering. My own children’s cell phone use was consistent with what I observed with other children their age. I concluded that cell phones were devices most secondary-age children had. They were their constant connection anytime, anywhere to resources that interested them in their private lives.

My mobile vision was becoming clearer. However, I still had some unanswered questions. First, at the secondary level how many students, regardless of their socioeconomic status, had cell phones? And, most important, how many had cell phones with a data plan capable of accessing the Internet? I posed that question to my good friend Joe Kelly, who had been a high school principal and at that time was an area superintendent for KISD. His gut feeling prior to going out and actually polling the students was very few. “The majority have phones, but very few will have data plans providing access to the Internet,” he told me. To find out, we went to some of the most economically disadvantaged junior and senior high schools in the district and asked students two simple questions: How many of you have cell phones? How many of you have data plans to access the Internet?

An overwhelming majority of students had cell phones, and surprisingly, the majority of those with cell phones had a data plan capable of accessing the Internet. The number of students with devices that had data plans was high enough for us to conclude that data-plan access was not going to be a limiting factor when considering mobile devices. This information was powerful and helped support our assumption that cell phones (at least among secondary students) were the one device that could provide anytime, anywhere access. The question still remained: Connectivity to what?
What a Mobile Vision Looks Like

At this point, I started focusing on what a mobile learning vision would look like for KISD. I knew mobile devices and cloud computing needed to have a place in K–12 education. I knew the majority of secondary students, regardless of their socioeconomic status, had mobile devices with data plans capable of accessing the Internet. I didn’t know what educational resources mobile devices would access via cloud technology. I didn’t know how mobile learning could be extended to the elementary level. I didn’t know how this radical change in the traditional education model would be introduced, understood, and crucially, accepted. So the next step in finalizing my mobile vision was to begin analyzing and trying to address my list of “I don’t know” questions.

First on my list was discovering what educational resources are required to enable mobile learning for K–12. As I began analyzing the list of existing resources used in KISD, I found that 90 percent of them were restricted to users on our internal network and were based on the traditional educational model. I knew that for mobile learning to occur, we needed to begin implementing educational resources that were engaging to students and, most important, accessible anytime, anywhere.

Using Web 2.0

I went back to what I’d observed with students using their devices. What tools were they using? One answer was Web 2.0 tools. As I began looking into these tools, I quickly discovered thousands that had educational value. These Web 2.0 tools were independent from an internal private network, only requiring access to the Internet. That was one question answered: Incorporating Web 2.0 tools would provide access to educational resources anytime, anywhere.

Stakeholder Buy-in and Digital Citizenship

The next unanswered question was how to introduce mobile learning in a way that would foster understanding and gain acceptance of our
strategic goal and initiatives from our stakeholder groups. Changing the traditional educational model was not going to be easy, particularly when we started introducing Web 2.0 tools into the process. We recognized that it would entail much more than simply explaining mobile learning. We would need a focused effort that helped our stakeholders along the change process to our new educational model. The answer is that we would have to educate our stakeholders on the big picture of digital citizenship—what it means to be a digital citizen, what the digital world looks like for our students, and what tools were out there that made mobile learning possible.

We also had to communicate what KISD was doing to prepare its students to function responsibly in a digital world. Stakeholders had to understand that the changes we were making to the traditional education model by incorporating mobile learning would help our student population understand what it meant to function and live in this new digital world. For example, over the last couple of years, I had grown increasingly frustrated with our approach to Internet filtering. Now, I am not saying we should abandon Internet filtering completely, but for seven hours a day while they are in our schools, students are wrapped in a tight protective cocoon, where we control where they go, what they do, and what they see on the Internet. Then the school day ends, and for 17 hours they are in the wide open world of the Internet. What were we doing as a school system to help them operate responsibly for those 17 hours? Stakeholders needed to understand the gap between the protective cocoon students encountered at school and the unprotected digital landscape that existed beyond school filters. As a school system, we needed to figure out how to bridge that gap.

At this point, my definition of mobile learning became clear. When I first started thinking about mobile learning and the possibilities for K–12, I was focused primarily on the device and how the device would change the landscape. Once I began answering the “I don’t know” questions, I came to realize that mobile learning was absolutely not about the device. It was about providing the educational resources and modes of instruction that would enable the mobile device to be a tool in that process. Changing instructional techniques was at the core of my mobile vision and would be the springboard
to changing the traditional education model. Equally important in a mobile learning program was incorporating digital citizenship. Getting stakeholders to understand what it meant for our students to be successful and responsible digital citizens in the digital world, now and in the future, provided the mechanism to gain their understanding and acceptance of our strategic goal and initiatives. If KISD were to be successful with the introduction of a mobile vision, we needed to spend time with our stakeholder groups.

So, my mobile vision for KISD would encompass three areas:

- **Mobility.** Providing anytime, anywhere access to information via district-provided or student-owned devices

- **Web 2.0.** Having instructional resources accessible via the cloud, accommodating anytime, anywhere access

- **Digital citizenship.** Gaining acceptance of the mobile learning model by fostering stakeholder understanding of what it means for students to be digital citizens, what their digital world looks like, and what digital tools they will be using to learn

With my vision formulated, the next step was actually getting support from the cabinet and school board to begin defining an implementation strategy. You know the old saying: timing is everything. Well, the stars had aligned, and the process of moving from vision to implementation strategy was about to hit KISD smack in the face.