

Learning Connections: Managing and Maximizing a Class Set of iPads

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Educators are regularly challenged to overcome the obstacles that stand in the way of effective integration of technology in the classroom. Flagstaff Unified School District (FUSD) in Arizona, USA, has taken steps toward implementing high-speed wireless networks, updating computer labs to ensure equity across schools within the district, and giving laptops to teachers. In December 2010, the district awarded a class set of 30 iPads to a team of teachers to explore how daily access to individual computing devices could engage and empower students, support educators, and improve and assess learning—all goals set forth in the U.S. Department of Education's National Education Technology Plan 2010.

The launch of the iPad and other tablet devices offers schools an affordable computing device option. However, iPads are designed as individual computing devices, so this pilot project sought to answer a number of questions related to implementation and use, such as:

- How easy will the iPad be to implement with students and teachers?
- What apps align with standards?
- How can iPads be used to help differentiate learning for students?
- What type of professional development do teachers need?

Class Set of iPads

The class set of iPads went to the fifth grade classes at Thomas Elementary School. The 84 students in the pilot came from various ethnic, cultural, linguistic, socioeconomic, and educational backgrounds. Thomas is a Title I school where 68% of the students qualify for free or reduced-price lunches. As learners, the fifth graders were also diverse, with a small group of students designated as talented and gifted and close to a quarter of the group identified as learning disabled, including several students who had one-on-one instructional aides. These students were part of full-inclusion classrooms. The goal was to offer each student a chance to grow and do their best, which meant significant differentiation for this diverse spectrum of learners.

The grant award included 30 iPads, a storage cart, a seven-port syncing device, weekly instructional support from the district's technology department, and a used Mac laptop for syncing multiple iPads.

Care and Use Agreement

The students were ecstatic about getting the iPads and wanted to start using them immediately. But first they had to help create a Care and Use Agreement. This activity was aligned to the NETS and state technology standards (digital citizenship, safety, and ethics) as well as state writing standards. Students brainstormed appropriate behaviors related to the care and use of the iPads, prioritized the list, and then discussed various ways to categorize the items. Some of the policies the students came up with included:

- Don't download inappropriate apps or go to inappropriate websites.

- Use the devices to work on the internet and not to play.
- Clean hands before using them.
- Don't remove the protective screen or cover.
- Put devices away properly on the iPad cart.
- Don't walk around with them.
- Don't press on the screen too hard or pound on it.
- Share ideas, information, and the iPad when asked.
- Keep the device away from food and liquid.
- Keep the iPad safely away from the edge of the desk.

This process created a huge sense of ownership for the students, who monitored and addressed behaviors that violated the policies the class had established.

The first class to use the iPads applied the screen protector and cover. Students discovered that it's not easy to remove every particle of dust before applying the screen protectors. However, this process helped create a sense of ownership for students, and we learned something too: Using dusting spray for electronics helps easily remove particles.

Some students immediately figured out how to personalize the iPads by choosing a wallpaper for the background, and they showed their peers. The classes later located Redkid.net and chose pictures that could be used as the wallpaper for the devices. This helped us keep track of the devices, because the backgrounds listed the first names of the students they were assigned to.

Allowing students to use the same iPad each lesson played a major role in the care of the devices. Teachers checked the devices out to students at the start of the lessons and then checked them back in at the end of the period. This ensured that the iPads were properly plugged in, eliminating significant wear and tear on the plug, and it allowed teachers to check the condition of the iPads after each use.

One advantage of the iPad is that it has fewer components that can be broken compared to a laptop or desktop. This is an important consideration when you have multiple classes or entire school populations sharing the devices.

Timely Tech Support

The devices rotated through three classrooms. Although the three teachers did not have prior experience with iPads, two of the teachers were trained as technology coaches. These two teachers were able to troubleshoot technical issues more easily. The district's technology department provided weekly tech support and suggested iPad apps appropriate for elementary students that aligned to state standards. They also trained the first students to use the iPads as peer mentors who could answer routine questions or help with minor troubleshooting when the devices rotated to the next two classes.

The iPads have only a few commands for accessing the device: slide, tap, and double-tap. The iPad interface was designed so well that even young children can use and master it with very little

instruction. However, it's important that teachers ask for help rather than become frustrated when attempting to troubleshoot. In-class instructional and technical support is necessary to ensure the devices are fully integrated with the curricula.

Rave Reviews

We conducted a number of interviews with students, and most were excited to use the iPads for schoolwork. One student said he didn't want to be absent from school for fear he'd miss out on using the iPad. (Watch a video of these interviews at <http://tinyurl.com/cxdpj23>.)

Teachers noticed that when using the iPads, students were on task—even those who had been difficult to engage or those with learning disabilities. In fact, many teachers and administrators from within and outside the district who came to observe the classes commented that it was difficult to identify students with special needs or English language learners because they all were engaged in the learning activity and assisting each other.

The teachers also noticed that their role had changed to that of active facilitator. For example, students using math apps received immediate feedback from the device, which allowed the teacher to know whether a math concept needed further study. Some teachers said the visual aspect of one app, *Lobster Diver*, helped students understand and apply measurement concepts. Additionally, because most apps provide multiple levels with increasing difficulty, students enjoyed challenging themselves and working ahead.

Next Steps

Based on the initial observations of this pilot project, the district chose to expand the program by awarding two class sets of iPad 2s, one set of the iPad 1s, and three class sets of iPod touches to teachers within the district. Thomas Elementary School was awarded the set of iPad 1s and purchased a class set of iPad 2s. The teachers are exploring ways to integrate these devices at other grade levels. Through a research study being conducted during the 2011–12 year, the school and district are looking closely at the effects on student learning, benefits related to differentiating instruction, and motivation and engagement of students in relation to the integration of the iPad with core curricula.

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