Chapter 3
iPad Integration in an Elementary Classroom: Lesson Ideas, Successes, and Challenges

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ABSTRACT

The availability of engaging apps on the iPad and its portability have encouraged many educators to adopt it as a teaching and learning tool in the classroom. However, because iPad integration is new, neither practical guidance nor best practices are yet available. Consequently, the authors integrated 13 iPads into a third grade classroom for a year to facilitate learning while examining how to unlock their full potential. The purpose of this chapter is to present specific elementary-level subject learning lesson ideas for iPads, identifying the advantages and challenges of such integration. They also provide practical tips for mobile technology integration in elementary classrooms.

INTRODUCTION

An increasing number of schools across the nation are embracing the iPad as a teaching and learning tool. For example, a Florida newspaper reports that over 600 iPads are being used in elementary, middle, and high schools in Manatee County, Florida (Hawes, 2012). Roslyn High School in Long Island utilized iPads in two humanities classes for online textbook and electronic portfolio development, and teachers observed benefits such as extending learning beyond a classroom and reducing printing and textbook cost. Dr. Brenner, the superintendent at Roslyn High School, says, “[An iPad] is not about a cool application…We are talking about changing the way we do business in the classroom” (Hu, 2011).
Distinctive features of the iPad have persuaded educators to adopt it in their classrooms (Hu, 2011; Waters, 2010). They are equipped with a camera that records high quality pictures and videos that students can easily incorporate into multimedia production. The touch display allows users to manipulate objects on the screen, and students can practice newly learned skills with thousands of free or low cost educational apps. Compared to laptops or desktops, iPads provide faster access to the Internet and offer affordable, diverse applications. Additionally, their portability and durability expands learning environments beyond the classroom; students can access information from anywhere at any time (Banister, 2010).

Although iPads include functionalities that benefit teaching and learning, decades of research on the impacts of technology have proven that a tool does not make students learn by itself. Well-structured instruction and appropriate curriculum support must be provided to maximize the learning benefits of technology integration (Penuel, 2006; Roblyer, 2006; Warschauer, 2006). However, because iPad integration is new, neither practical guidance nor best practices are yet available. Consequently, the authors integrated 13 iPads in a third grade classroom for a year to facilitate subject learning and examined ways to utilize iPads to their full potential. This chapter discusses the best practices that the authors found during implementation.

THEORETICAL FRAMEWORK

How should the iPad be used to help student learning? To ensure that the integration of iPads was beneficial to student learning, the authors first asked this question. Researchers have claimed that technology is often used for the sheer sake of using it, neglecting its purpose (Cuban, Kirkpatrick, & Peck, 2001). Technology integration should support curriculum goals and the development of 21st century learning skills such as collaboration, communication and problem solving skills (Hew & Brush, 2007; Warschauer, 2010). Creating meaningful activities with technology is critical because engaging tasks drive learning. Howland, Jonassen, and Marra (2012) claim, “In order for meaningful learning to occur, the task that students pursue should include active, constructive, intentional, authentic, and cooperative activities” (p. 2).

First, students should actively participate in learning activities. Constructivists claim that a teacher cannot deliver knowledge; rather, each student develops his or her own knowledge (Gordon, 2009). Students should be given opportunities to seek answers by manipulating objects and engaging in learning processes. Students have previously manipulated tangible physical objects in classroom, but technology allows students to conduct a similar activity in a more safe and ethical way. For example, an app called Frog Dissection allows students to virtually manipulate a frog using pins or scissors and to view organs in 3-D. The app also provides detailed information about each organ and a comparison between humans and frogs, assisting students with scientific knowledge development.

Second, students should reflect on their learning processes. Dewey (1938) claims that experience itself does not make people learn; people learn when they reflect on experience. Providing engaging activities is important but is not sufficient for meaningful learning (Howland, Jonassen, & Marra, 2012). Students should review their learning experiences, articulating what they learn and how their learning is related to existing knowledge. Writing apps such as Pages or Evernote can be useful for this process. Students can share their reflections by using blogging apps such as Word Press. Skipping over site addresses and log-ins, students easily update blogs and comments, effectively facilitating the reflection process.

Third, students should be guided to establish and achieve personal learning goals. All human actions are goal directed (Schank, 1994). When students have definite aims, they are more engaged...