

Chapter 21

Moving From Theory to Practice: Integrating Mobile Devices in Elementary Reading Instruction

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ABSTRACT

Technology integration continues to be a professional development concern, especially in elementary schools. It remains unclear why there is a difference between how teachers talk about using technology and how they apply it in teaching reading. The purpose of this investigation was to explore professional development options that would help teachers connect theory to practice by studying their decision-making process. In a case study design, 10 K-4 teachers participated in one 60-minute interview, one follow-up interview, and one 45-minute focus group. With the use of typological analysis, transcripts were coded for initial and emerging themes. Results indicated that integrating mobile devices was highly dependent upon teachers being self-directed learners. Teachers relied on informal collegial interactions when deciding to use mobile devices. Continuous professional development that addresses adult learning styles was recommended by the teachers to support technology adoption.

INTRODUCTION

Elementary classroom instruction has changed with the introduction of one-to-one technology options. Young children are entering classrooms with digital competencies, having had at-home experiences with a variety of mobile devices. Families with children ages eight and younger have seen an increase in tablet ownership (Common Sense Media, 2013). With this increased familiarity, some schools have moved forward to invest in mobile devices such as tablets and iPads, to transform classroom instruction.

DOI: 10.4018/978-1-5225-7918-2.ch021

As elementary schools invest in mobile devices, classroom teachers have new options for integrating technology into their instruction. Even with this accessibility, teachers struggle to use technology in reading instruction (Hutchinson & Woodward, 2014). In the past, teachers have questioned the effectiveness of technology use during reading instruction, especially in elementary classrooms (Levy, 2009). In the twenty-first century, teachers need to determine how to use mobile devices effectively to support print-based literacy skills.

In a relatively short time period, new studies have investigated the potential of using 1:1 technology as developmentally appropriate for young children (Hutchinson, Beschoner, & Schmidt-Crawford, 2012). Mobile devices offer students multitouch screens with a large range of applications, and the capability to store a variety of digital books. Many digital books have interactive options such as hyperlinks to explore related topics on the internet and text-to-speech functions. Such options promote accessibility to the text for struggling readers. Furthermore, mobile devices provide teachers the opportunity to develop print-based reading skills (Northrop & Killen, 2013). However, even with the promise for supporting instruction, some teachers continue to have difficulty integrating mobile devices into reading instruction.

The gap addressed in this study is the lack of understanding about how to close the discrepancy between knowing about mobile device use and actually applying the knowledge during reading instruction. The effective use of mobile devices requires teachers to have an understanding of the relationship among technological, pedagogical, and content knowledge (TPACK). Brantley-Dias and Ertmer (2013) have explored the potential of the TPACK framework as a tool for reflective practice. In addition, Hutchinson et al. (2012) examined how a single teacher used TPACK for planning reading instruction with mobile devices. Through reflective practice, teachers can explore their decision-making process. These reflective practices support not only autonomous learning, but learning in community.

To continue to gain an understanding about using mobile devices, teachers can participate in continuous professional development. Professional learning communities and job-embedded professional development support subject knowledge and operational understanding of technology (Cifuentes, Maxwell, & Bulu, 2011). Teachers need time to plan and then practice what they have learned. By participating in continuous professional development, teachers engage in collegial discourse. This discourse enhances instructional decision making. However, it also could lead teachers into the Knowing-Doing Gap (Pfeffer & Sutton, 2000) or talk without action. It is imperative to find better ways to help teachers to connect theory to practice through professional development.

BACKGROUND

Basic reading-skills support the twenty-first century skills students need to be successful world citizens in a competitive global market. The basis of critical thinking, problem solving, communication, and collaboration skills is the proficient use of reading skills. Current national and international assessments show little to no gains in the reading skills of American students. According to the National Assessment of Educational Progress (NAEP), there was no significant difference in the 2013 report in reading scores for both fourth and eighth grade students when compared to the same scores in the 2011 report. Reading scores did not show statistical difference within any of the three student levels, which include advance, proficient, and basic. Furthermore, the percentage of eighth grade students at the basic level increased to 68% and fourth grade students increased to 78%. The NAEP (2013) defined basic level as a

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