Chapter 53
The Integration of Digital Tools during Strategic and Interactive Writing Instruction

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ABSTRACT
The purpose of this chapter is to gain insight from the ways a group of elementary teachers of the deaf and hard of hearing chose to integrate digital tools into evidence-based writing instruction and the ways these technologies were used to support student learning. After professional development that exposed these teachers to twelve new digital tools, they were observed incorporating several new tools into their instruction; however, most of the tools were not the ones targeted during professional development. There are factors related to both teacher perspectives and professional development design that seem to play a role in what digital tools are used, how they are used, and who uses them. Based on these factors, suggestions are made for the design of future professional development that more effectively introduces technologies to teachers and supports their efforts to integrate these tools into classroom instruction.

INTRODUCTION
In the recent past, advances in technology have quickly and dramatically impacted the way we read, write and communicate. Blogs, wikis, e-mail, instant messaging, text messaging, digital gaming, social networking, and applications software have all become an integral part of students’ community and personal literacies (Gerber & Price, 2011; Kist, 2010; Kress, 2003; Leu & Kinzer, 2000; New London Group, 1996). Digital tools are inextricably woven into their everyday cultural and literacy practices. Given the ubiquity of digital tools in our societies, engaging in school-
based learning devoid of these technologies might actually feel foreign to our students. Integrating technologies into the classroom in support of teaching and learning has the potential to help connect to students’ prior knowledge and build on their previous experiences.

In this chapter, we give focus to instructional writing approaches that capitalize on the technologies available to the current generation of writers. When digital tools traditionally used outside of the classroom are invited into the classroom, there is potential not only to motivate students and connect with their interests and experiences, but also to enhance key components of effective writing instruction, such as idea development (Graves, 1983) and writing for authentic purposes and audiences (MacArthur, Graham, & Fitzgerald, 2005). We entered into this work by first observing and learning from teachers who integrate digital tools into effective, evidence-based writing instruction. The teacher participants were a small group of elementary teachers of the deaf and hard of hearing. These teachers were involved in grant funded development efforts related to Strategic and Interactive Writing Instruction (SIWI). We identified what digital tools they selected and used during writing instruction and explored how those tools were used to support the writing process. Then, we examined how teachers responded after a professional development session where they were introduced to new digital tools specifically chosen for their ability to complement their teaching and learning practices.

BACKGROUND

In this section, we provide information about the instructional approach that that guides the writing instruction in the classrooms involved in the study and the relevant research that has been done on the integration of digital tools during writing instruction.

What is Strategic and Interactive Writing Instruction?

The current study is a part of a three-year grant project to more fully develop SIWI for the later elementary level and then assess its ability to positively impact student literacy achievement. SIWI is an approach to instruction that includes a focus on both strategy instruction (Englert, Raphael, Anderson, Anthony, & Stevens, 1991; Graham, 2006) and interactive writing (Englert & Dunsmore, 2002; Englert, Mariage & Dunsmore, 2006; Mariage, 1996, 2001; Wolbers, 2007). Additionally, there are specific components of SIWI which respond to the linguistic and metalinguistic needs of students who are deaf and hard of hearing (Wolbers, 2010). For example, the approach includes the use of a strategy called the “language zone”--a space in which an idea can be captured in a variety of mediums (e.g., acting, drawing, writing) while developing the language associated with the idea. The language zone is often used to assist deaf and hard of hearing students who communicate manually in translating from American Sign Language (ASL) to English; however, it can be used with all students to develop their receptive and expressive language. Another component of SIWI is NIP-it lessons. NIP-it lessons are mini-lessons in which teachers Notice a student’s need, then provide explicit Instruction outside of collaborative writing followed by opportunities for contextualized Practice of this skill within authentic writing.

While the SIWI instructional approach does encourage independent writing, guided, interactive writing is a core component. During guided, interactive writing, the students and teacher construct text collaboratively. Because SIWI also places emphasis on authentic writing experiences, co-construction is done with an audience and purpose in mind (Wolbers, Dostal, Bowers, 2012). Students choose the topic they will write about, an audience they will write for, and the type of