

Chapter 10

Grappling with Change: Web 2.0 and Teacher Educators

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ABSTRACT

Technology is not a panacea for educational reform, but the use of technology in the classroom can enable teachers to engage today's students in learning content. While some believed that new, young teachers would bring technology to the PK-12 classroom, this clearly has not happened. Since teacher educators generally do not model technology integration and instead use primarily teacher-centered instruction, many new teachers do not know how to integrate technology, particularly Web 2.0 technologies, into instruction. To encourage teacher educators to learn about these easy-to-use technologies, this chapter examines wikis as a low-threshold Web 2.0 tool. This chapter will discuss the power of using these technology tools.

INTRODUCTION

Mrs. Rosales was eager to begin her first year of teaching. Newly graduated, she had many ideas about integrating technology into her sixth grade science class. During new teacher inservice, Rosales found out that her classroom would have four computers and Internet connectivity available every day. Her professors had modeled multiple

ways to use technology with only one to four computers in a classroom and she wanted to try out the online scavenger hunt she had saved from her methods class. Armed with her lists of students in each team, she was ready for the first day of class. Looking at the faces of the students, she said, "Hello students; my name is Mrs. Rosales. We are going to have fun learning from each other and experts in the field of science for the rest of the year. Let's begin.. ."

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A dilemma facing many teacher educators today is how to effectively teach the content based on current laws and the whims of school boards or legislators. Simultaneously, these same teacher educators are expected to integrate technology-rich, student-centered, problem-based learning into their classes. Most school districts expect new teachers to know how to use technology in teaching. However, typically little has changed in many college classrooms. Professors, who did not grow up in the digital era, continue to use primarily teacher-centered direct instruction. Thus, new teachers frequently enter the classroom uncertain how to teach any differently than what they experienced in the college classroom – *teacher-centered, direct instruction*. In order to inculcate technology usage into the preservice and inservice teachers' repertory of instructional methodologies, they must experience technology being used effectively in a variety of ways, especially in the high-stakes test environment in which most teachers are working (Ertmer & Ottenbreit-Leftwich, 2010).

In hopes of graduating highly qualified and technology literate teachers, universities expect college faculty to incorporate technology into all courses. Thus, teacher education faculty members feel pressured to become technology savvy quickly so they can model effective use of technology within each course. With the demands of teaching, research, community service, and committee work, the challenge for faculty is finding time to learn new technologies, and then learn how to integrate them into their coursework. Web 2.0 applications offer a solution for quickly learning new technologies that can be modeled to pre-service teachers. These technologies are easy-to-use and can be integrated into the teacher preparation course without requiring major changes in curriculum or projects. In addition, the Web 2.0 technologies provide faculty with productivity tools that can make their research and collaboration easier to accomplish.

Indeed, Web 2.0 technologies offer a hope for changing the paradigm of teacher-centered instruction still prevalent in the classroom. While the process of change is difficult and sometimes painful, this chapter will focus on simple, but highly effective Web 2.0 tools that faculty can learn quickly and incorporate in the classroom immediately. A discussion of low-threshold technologies will be included with an emphasis on wikis and their power to change the classroom environment. Links to resources used in PK-12 as well as higher education will also be provided.

LACK OF TECHNOLOGY IN TEACHER EDUCATION PROGRAMS

Mrs. Rosales was having a rough year, typical for first-year teachers. School requirements and paperwork that she had never seen before kept her busy. Even though she stayed late after school every day, Mrs. Rosales wondered if she would ever catch up. Just as she was most overwhelmed, her assistant principal, Ms. Poteet, visited her classroom for a walk-through evaluation. The students were working in tandem with a class in China to better understand cultures in different countries. Her students, excited about talking to students in China, were noisy as they shared information. To her relief, Ms. Poteet was extremely pleased to see students adding content to group wikis that housed all their research on the Chinese culture. After Ms. Poteet left, Mrs. Rosales smiled. She was glad that she had completed so many similar activities in her teacher education program and was well-prepared to integrate a variety of technology tools into her lessons. Working with Web 2.0 technologies was the easy part of her job.

Educational reform is of significant concern to Americans and as research suggests, U.S. students continue to lag behind in math and science (Gray, Thomas, & Lewis, 2010). In the documentary

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