Chapter 13
Faculty Teaching Beliefs, ePortfolios, and Web 2.0 at the Crossroads

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ABSTRACT
The research on faculty teaching beliefs and teaching strategies reported in this study suggests that, without comprehensive new approaches for faculty preparation, faculty in higher education are unlikely to capitalize on the potential eportfolios present and the world of Web 2.0 requires. Without deep rethinking of teaching and learning in a technology enriched and increasingly complex global context, educators are unlikely to promote the kind of learning eportfolios represent, learning that is necessary in a world of increasing challenges and opportunities.

INTRODUCTION
The advent of open knowledge and open source and the ubiquity of the phenomenon identified as Web 2.0, as evidenced by the phenomenal growth of Facebook, Google, and hundreds of other open and social Internet applications, have ramifications for education. Many educators are speculating on the implications of Web 2.0 for the future of education (Grush, 2008) while others argue that it is the future (Hargadon, 2008). Whether the impact is imminent or upon us, as Batson (2008) observes, “designing anything in Web 2.0 requires new thinking” (2008, p. 2).

At the same time, educators have been slow to understand that it is how we implement a technology, not the technology itself, that most influences learning. Yet research that focuses on discreet implementation variables rather than the technologies themselves are only incrementally
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gaining purchase in the literature and perhaps even less so in practice. It is in this context of technology, in the thinking that guides teaching practice, that the study reported here was conducted. In particular, and in collaboration with the Inter/National Coalition for Electronic Portfolio Research, the study reported here is focused on ePortfolios as a nexus application—nexus in that ePortfolios can be used as either an application for traditional or teacher-centered assessment management, or they can be used as a Web 2.0 learner or learning-centered generative, social, and integrating application. How ePortfolios are being and will be used depends in large measure on the teaching beliefs that guide their implementation and the quality of learning that follows. It is that range of application and the variation in the understanding of ePortfolios that make it a valuable lens for examining the relationship between faculty teaching beliefs, teaching practice, and educational innovations.

THEORETICAL FRAMEWORK

Faculty Teaching Beliefs

Faculty members often report that they have not previously taken the opportunity to reflect on and identify their own teaching beliefs in terms of how students learn and how their teaching strategies influence student learning. Although faculty beliefs exist in an implicit form without being articulated or verbalized, these implicit beliefs play an integral role in guiding many aspects of teaching practice (Ajzen, 1985; Pajares, 1992). Pajares (1992) notes that beliefs play a significant role in determining how people perceive, interpret, and organize information. They become a basis for teacher behaviors and actions in the classroom (Trigwell & Prosser, 1999). A substantial body of research indicates that an effective way to change teaching practices is to help teachers make their implicit beliefs explicit (Ajzen, 1985; Pajares, 1992; Brookfield, 1995; Kane, Sandretto, & Heath, 2002). It is therefore critical to help faculty develop awareness of their own teaching beliefs, and an important way to promote that awareness is to sharpen the ways teaching beliefs are assessed (Nottis, Feuerstein, Murray, & Adams, 2000; Van der Schaaf, Stokking, & Verloop, 2008). However, measures of faculty beliefs are primarily found in research on K-12 or pre-service teachers (Trigwell & Prosser, 2004). Furthermore, those measures tend toward a dualistic approach that distinguishes generally between traditional teacher-centered beliefs and learner-centered beliefs. Some existing measures of teacher beliefs attempt to isolate more progressive constructivist approaches to teaching but do not differentiate social from individual theories of constructivism. In order to meet the challenges implicit in a Web 2.0 social networking-rich environment, teachers must embrace the theory of social constructivism and the principles of collaborative learning (Bruffee, 1995) and learning communities (Lave & Wenger, 1991) that have presaged and deepened the theory and develop new strategies for expanding the principles (Batson, 2008; Grush, 2008).

Theories of learning loosely inform the current notions of teaching and learner-centered practice, and it is common to point to behaviorism as it may outline traditional or teacher-centered practice. Behaviorism was a predominant learning theory in the 1960’s and relies heavily on an understanding of learning that is measurable and driven by a complex interaction of incentives. To the extent that those incentives are provided by external agencies that shape learning behaviors, it understandable that the provisioning of those incentives by a controlling agent—a teacher for instance—has led to an association between behaviorism and teacher-centered practice. Ongoing research built upon key aspects of behaviorism as cognitivism emerged, which allows for an understanding of critical learning gains that may not be observable. Cognitivism has been followed by constructivism,
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