Chapter 77
Preparing to Teach with Flipped Classroom in Teacher Preparation Programs

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ABSTRACT

The chapter outlines best practices in the use of Flipped Classroom to promote active and meaningful learning in higher education, specifically preservice teacher preparation courses. The theoretical foundation supporting the use of Flipped Classroom is reviewed as well as issues related to its use. Recommendations as to how to integrate Flipped Classroom are examined as well. Linkage to the goals of teacher preparation programs are made to assure the reader's understanding of the recommendations that follow.

INTRODUCTION

Assuring the classroom success of the teachers we prepare is the central goal of all teacher educators. Criticism of the ways teacher educators prepare preservice teachers comes from policy makers, business leaders, and K-12 educators as well as students. The criticism of preservice teachers' effective use of technology is also of particular concern since preservice teachers may experience difficulties translating course work into effective technology practice (Watson, Blakeley, & Abbot, 1998). This disconnect between course work and the development of effective technology practice often occurs when preservice teachers do not fully understand the principles of teaching and learning with technology, many of which are hard to "integrate" without first-hand experience. Often we fail to prepare preservice teachers for classroom success using technology and other authentic methods of learning, such as inquiry and problem-based learning (Darling-Hammond & Bransford; 2005; Kagan, 1992). This is particularly problematic in a time when many K12 educators face tremendous pressure to adapt their teaching to

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online or blended learning environments (Dexter & Riedel, 2003; Niess, 2005).

The result of this technology disconnect, compounded by other pivotal challenges faced by novice teachers, can be seen in the research documenting high attrition rates during the teacher induction years (Darling-Hammond, 2003; Moore Johnson, & The Project on the Next Generation of Teachers, 2004; Shen, 2003). As preservice teacher educators, we strive to model authentic and meaningful learning strategies for our students. In fact, modeling ways of teaching with technology is important in helping preservice learners figure out how best to use technology to support learning (Chickering & Ehrmann, 1996; Rogers, 2004). Consequently, we believe that use of Flipped Classroom is an effective use of technology that shows great promise (Bergmann, & Sams, 2012, Brunsell, & Horejsi, 2013) for teacher preparation and should be used within teacher preparation programs.

Flipped Classroom is a reversal of traditional modes of classroom based teaching and homework. Outside of class students access online videos or instructional DVDs. In class, students focus on understanding and applying content from previously viewed videos. This is done via group or individual problem solving activities, discussions, and/or other learner centered activities that promote critical thinking and reasoning (Garrison & Kanuka, 2004; Lage, Platt, & Treglia, 2000; So & Brush, 2008; Strayer, 2012). The teacher's role is to guide and facilitate that understanding (Butrymowicz, 2012). Since we want to bridge the technological divide with our students we propose using Flipped Classrooms in order to help preservice learners develop the knowledge, skills, and dispositions needed to succeed as technological users and innovators. While Flipped Classroom is most associated with the use of online resources (i.e., videos), it can be used without Internet access assuming videos are loaded onto DVDs or other storage devices that do not require internet access. Viewing videos on DVD addresses some of the equity issues associated with the "digital divide" and ongoing concerns related to reliable internet access for many learners (Valadez & Duran, 2007).

THEORETICAL FOUNDATION

The theoretical foundation supporting the use of Flipped Classroom in teacher preparation programs is grounded in an understanding of the social and intellectual learning environment. In this environment learners actively engage knowledge in ways that act as catalysts for deep and meaningful learning (Noddings, 2005; Piaget & Inhelder, 1969). Flipped Classroom is also grounded in a consideration and respect for individual and diverse learning needs. Using Flipped Classroom allows teacher educators to motivate and guide learners to specific understanding even as they model use of an innovative method of teaching with technology that will prove meaningful and appropriate for their future practice.

Constructivism and Flipped Classroom

Constructivists contend learning is an intellectual process in which the learner forms or constructs new knowledge by combining new ideas with those acquired during previous learning experiences (Schunk, 2011). The depth of what is understood is affected by previous knowledge and interests (Bruner, 1993; Piaget & Inhelder, 1969). The use of Flipped Classroom in teacher preparation programs provides a modern instructional model for how to engage learners' natural curiosity, increasing their interests in teaching and effectively building new conceptual constructs using technology. By using Flipped Classroom, preservice learners see, hear, and experience something new or unique via out of class video study. Linking the new learning experience from the Flipped Classroom videos to previous knowledge or understanding,