Chapter 15

Video Projects: Integrating Project-Based Learning, Universal Design for Learning, and Bloom’s Taxonomy

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ABSTRACT

Video projects offer valuable opportunities for students to engage in the academic enterprise and demonstrate what they are learning. This chapter explores what will be referred to as the Helix-Flow: an amalgam synthesizing and strengthening three theoretical frameworks of instruction, including Project-based Learning, Universal Design for Learning, and Bloom’s Taxonomy of Cognitive Domain. The Helix-Flow captures the essence of these three theories and serves as a backdrop for understanding and appreciating video projects as a learning artifact. As a helix, the spirals wrap around the cylinder or cone. Each spiral represents one of the theories and the cylinder or cone represents student engagement with video projects. The spirals or theories support the cone or student engagement with video projects. Each theory or spiral has its own inherent and prescribed set of principles and guidelines. Each theory integrates with the others while keeping its own strengths, providing a comprehensive approach to instruction and student engagement. Each theory scaffolds differentiated instruction. This chapter will also examine the five Rs as guidelines for multimedia projects – Rationale, Roles, Resources, Rubric, and Readiness as well as the design of video assignments, assistance, production phases, and assessment.

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INTRODUCTION

Schwartz and Hartmann (2007) argued the paucity of empirical evaluations on the use of video for learning. They reviewed abstracts from ten issues of five different peer-reviewed journals published before October 2005 on learning interventions at all ages and from diverse topics, comparing the number of research articles that focused on video-aided learning (VAL) with computer-aided learning (CAL). Relevant findings include the following: of the 48 journal abstracts on learning and instruction, they found that only 6.3% were on VAL and 16.6% were on CAL; the 31 journal abstracts on cognition and instruction also yielded low results for VAL at 3.2% but a higher result of 25.8% for CAL. Because of an apparent need for more data that highlights the affordances of video as a tool for learning, this article seeks to add to the scholarship of teaching and learning: (1) by reviewing how video projects have been used by faculty and students from various disciplines to enhance instruction and increase student engagement; (2) by highlighting three theoretical frameworks that scaffold teaching and learning in the context of video projects; and (3) by discussing faculty and student preparedness in producing videos.

We start with a discussion of video projects and how they impact teaching and learning. To provide a theoretical framework for video projects, we underscore the principles and guidelines of Project-based Learning (PBL), Universal Design for Learning (UDL), and Bloom’s Taxonomy of Cognitive Domain. We propose a model for applying these three theories – the Helix-Flow. We also discuss the five Rs for developing and assessing multimedia, particularly video projects. We provide issues and considerations to keep in mind before we conclude.

Almost every day, we hear about new multimedia resources like smart devices that could be used to take video- and audio-clips. Multimedia can include any combination of media formats such as text, graphical images, audio, and video for the purpose of providing information and/or instruction (Yocom & Bishop, 2010). For this chapter we will focus on video projects. With a buffet of multimedia-rich resources available, the use of video for teaching and learning is increasingly becoming the technology du jour. Students nowadays are asking their instructors to have the option of submitting video projects as part of coursework. Faculty are increasingly using videos for teaching. (Bishop & Yocom, 2011; Yocom & Bishop, 2010)

Video projects highlight the many dimensions of teaching and learning. Not only does video accommodate different learning styles – auditory, visual, kinesthetic – video projects also foster teamwork, time management, self-efficacy, and technology skills. Don Knezek of the International Society of Technology in Education noted, “Now and in the future, effective teachers of digital-age learners will be challenged to move away from models of teaching and learning as isolated endeavors. As they model work and learning that reflects inventive thinking and creativity, teachers must become comfortable as co-learners with their students and with colleagues around the world” (ISTE, 2008, p. i).

Some examples of video projects for teaching and learning are exemplary in their own right. These video projects address the paucity of video-aided learning resources found by Schwartz’s and Hartmann’s literature review on journal abstracts on or before 2005 and demonstrate increasingly more resources are being made available to educators and students.

Video Projects Online

Multimedia Educational Resource for Learning and Online Teaching (MERLOT) ELIXR is an initiative that hosts a digital repository from more than 70 discipline-specific multimedia case stories. These digital stories are currently being used for faculty development and include real-life experiences that spotlight exemplary teaching
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