Chapter 6
Use of Video to Enhance Education

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ABSTRACT

Even with so many different educational tools and evolutions in techniques of instruction (both peda-gogical and andrological approaches), the use of video is one of the most effective means of instructing students. This chapter presents multiple evidence detailing why video can greatly enhance instruction in a multiple of ways to include its use in motivation, explanation (via multi-modalities), and feedback. This chapter will also demonstrate the benefits of using a student-centered/learning-centered instruc-tional video capturing system within the classroom to improve learning for both face-to-face and online learning. Resources and specific examples are provided to demonstrate that video is a fundamental tool that should be used to enhance both the educational process and instructional experience. New uses and video technologies are also addressed for future investigation and incorporation.

CHAPTER OBJECTIVES

- Define the term "video"
- Explain its importance to education
- Show how video can be used to enhance motivation
- Show how video can be used to improve the overall education process
- Show how video can help explain information to students
- Show how video can be used to enhance feedback to students
- Show how video can be used to enhance feedback to instructors
- Describe an instructional video capturing system
- Describe a student-centered instructional video capturing system
- Express the importance of using engagement with video
- Describe video analytics
- Show how video will continue to grow and be used in education

INTRODUCTION

It is important to have a shared understanding of what is being referred to when the term video is used. *Video* simply means a recording of visual images that can contain audio (Wetzel, Radtke, Stern, Dickieson, & McLachlan, 1993). With this type of general definition items such as: filmstrips, video-tape recordings, animations, TV broadcasts, DVDs, streaming/on-demand Internet video, and any other type of digital moving image are all considered video. Yet now in the 21st century, video can now have enhanced capabilities in that it can be interactive, can be viewed anytime and anywhere through multiple devices (examples: cellphones, tablets, laptops, desktops, and wearables such as Google glass), can be fully tracked for advanced analytical observations, and can be easily created by anyone with a simple and inexpensive cell phone. Its use, availability, and accessibility are very widespread both for face-to-face and online instruction (University Business white paper, 2013). Yet having video in the classroom (real or virtual) is not the definitive answer to anything. The important aspect to realize is how video can best be used (facilitated) for teaching. Although there has been a large amount of research and debate as to whether or not media itself can influence learning, most notably the Clark (1983) vs. Kozma (1991) scholarly arguments, this chapter will move beyond that and will instead focus on how video can enhance the desire (motivation) to learn and the learning process overall (Desai & Vijayalakshmi, 2015; McCann, 2015). Additionally, this chapter will discuss the value of repurposing video, using video as a means of multi-modality learning, and the power of using a student-centered/learning-centered instructional video capturing system in creating and using video.

MOTIVATION

Motivation is a key concept to grasp in any learning condition and video can assist in attaining it. If a student does not have the desire and is not motivated to learn, then they simply will not focus on the content and therefore the brain will not be able to receive the needed stimuli to even attempt to learn content (Sousa, 2011). The venerable Dr. Woldkowski additionally suggests the use of appropriate video to enhance motivation and student experience (2008). The question then arises as to how to actually motivate a student. By using the effective, popular, and proven ARCS (Keller, 1987; Rigby, 2015; Yau, Cheng, & Ho, 2015) model for motivation, the concept is broken down into four distinct needed conditions to attain full motivation: Attention, Relevancy, Confidence, and Satisfaction. The ARCS (Keller, 1987) model was derived from a culmination of a multiple of other theories, but overall it is grounded in expectancy-value theory, which comes from the works of both E. C. Tolman and K. Lewin. (p. 2). The following is a breakdown and explanation of each of the four ARCS motivational conditions.

Motivation: Attention

It is not enough to just temporarily grab a student's *attention*. If it were, then just yelling at the beginning of a presentation would suffice. What is needed is to properly obtain and hold onto a student's attention for the duration of the instruction. To accomplish this "it is necessary to respond to the sensation-seeking needs of students," as well as to "arouse their knowledge-seeking curiosity," "without overstimulating them" (Keller, 1987, p. 3). Video would be the perfect tool for this. A well crafted video depicting action and/or emotion can be used to spark students' arousal or curiosity for the subject matter.

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