

# Chapter XXVI

## Using E-Learning to Increase Opportunities in CTE and Adult Education: Integrating Face-to-Face with Two-Way Interactive Video Instruction for Career and Technical Educators

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### **ABSTRACT**

*Faced with the challenge of training Career & Technical Educators (CTE) in rural areas, the authors developed a hybrid delivery system that would minimize and condense face-to-face instruction, while integrating distance components through the use of two-way interactive technology and an online course management system. The program described in this chapter is for new teachers, designed to model classroom teaching techniques, methods of delivery, and best teaching practices. The online components combined with the two-way interactive system give new teachers the opportunity to share ideas and issues with the whole class, either face-to-face or online. This model is based on the premise that the new teacher will also obtain many teaching skills by being actively engaged in the teaching process, guided by a capable mentor at her site. The purpose of this chapter is to unveil an e-learning model that accommodates distance students, especially those in the teaching profession.*

## **INTRODUCTION**

When we examine the learning styles of Career and Technical Educators as well as other adult learners within our Colorado State University (CSU) cohorts, we often find that many are kinesthetic, hands-on learners, preferring sequentially-structured curriculum (Gregorc, 1982). A curriculum that is stimulating, engaging, and rich in sensory input is inviting to these teachers. They really value the student interaction and the chance to share ideas with their peers. But these learners have time and travel constraints; they are often non-traditional students with full-time jobs. Therefore, they also need a solution that is flexible and is close to home.

In an effort to design education opportunities that accommodate this type of learner, we at CSU have developed a hybrid model of e-learning that integrates face-to-face instruction with two-way interactive video and online technologies. Our goal has been to improve student-student interaction and student-teacher interaction through distance learning mechanisms to improve student learning.

The main focus of this chapter is on the Teacher Authorization Program (TAP), for which Linda Lyons, the main author, has been the coordinator for more than twelve years. The TAP program is a part of the credentialing and licensing requirements for new Career & Technical Education (CTE) instructors primarily teaching in programs such as cosmetology, welding, nursing, and auto technology. Through the TAP program, these instructors (often non-degreed), receive training in teaching methods and best practices, in a condensed format. Linda has developed and delivered the teaching methods courses for these Career & Technical Educators, while managing all aspects of the TAP program. Most of the courses have traditionally been delivered face-to-face, where teachers have come to the Colorado State University (CSU) campus, or we have travelled to their site. In more recent times, we have utilized our

course management system (CMS) to augment the classes. Faced with the challenge of training teachers in rural areas, we have collaboratively worked through the logistics of connecting 2-way interactive video to various sites throughout the State of Colorado, with as many as three remote sites at a time. Two-way interactive video is also referred to as interactive video conferencing, video teleconferencing, and a variety of other names (Stone, 2006). We will use the term interactive video conferencing (IVC) for this chapter.

To create a more user-friendly and engaging learning environment, these distance solutions often have multiple facets. Our courses often include: opportunities for conferencing with the instructor and other students, engaging students in online discussions through the creation of small cohorts within the class, and small teams leading topic discussions accompanied by online presentations and a variety of other visual aids. As noted by Gardner (1993) and Sylwester (1995), these types of interactions between students contribute to a successful learning program.

The purpose of this chapter is to unveil methods and designs for an e-learning model that accommodates distance students, especially those in the teaching profession. We believe that an optimal learning environment for new teachers includes modeling teaching techniques and methods, and this requires a face-to-face component. Specifically, in this chapter we: describe in detail the components of this integrated solution, list advantages of the model, and provide tips for using this e-learning model.

## **BACKGROUND**

When looking at the best methods for training instructors and teachers, we should focus on best ways to learn; after all, that is the primary task of teachers: to deliver content in a way that their students will grasp it. Much of the brain research conducted over the past three decades

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