

## Chapter 45

# Developing ITV Best Teaching Practices and Effective Professional Development Programs

**Jared Keengwe**

*University of North Dakota, USA*

**Leslie Ann Bieber**

*Prairieview Special Services, USA*

**Gary Schnellert**

*University of North Dakota, USA*

### ABSTRACT

*The purpose of this study is to explore the characteristics of an effective State Interactive Video (ITV) program relating to teacher qualifications and strategies, student research and involvement, organization, economical benefits, and technical support. Evidence from this study suggests that ITV instructors need more organization and preparation than is typically required for face-to-face teaching in a traditional classroom and the ability of ITV instructors to adapt and learn new technology-based teaching techniques is critical for student academic success. These findings are beneficial to school administrators planning to design and implement sound ITV pedagogical and professional development programs and practices to enhance student learning.*

### INTRODUCTION

In 2002, Governor John Hoeven of North Dakota delegated the E-Rate federal funds to provide free T1 lines to all K-12 schools in order to operate the

new H323 software system to improve the Interactive Video (ITV) System. In 2002, the Information Technology Department of North Dakota (ITD) provided video connections to 140 classrooms, with an additional 80 classrooms projected by mid-2003. From August 2009 to May 2010 school year, ITD provided video connections to 490 K-12

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classrooms and connected 17316 video sessions. In less than 10 years, North Dakota has formed a daily integration and reliance on ITV for K-12 education. From August of 2009 to May 2010, there were over 17,000 K-12 ITV conferences scheduled in North Dakota.

Videoconferencing is not new to education and has been used since the early 1970s in various manners usually based on the current technology available. Through the years of use, a number of best practices have consistently arisen. "This can create a paradigm effect which may prevent people from seeing what is happening around them and from realizing the potential in a new application of technology. Jim Wetherbe, Bobby G. Stevenson Chair of Information Technology at Texas Tech noted, "The biggest obstacle to innovation is thinking it can be done with old way." In Wetherbe's words, "technique lags behind technology" (as cited in Twigg, 2001, p. 3)

## **History of K-12 ITV Education**

In 1989, The West River Interactive Television Cooperative (WRITC), which included Hazen, Beulah, Stanton, and Center North Dakota, piloted an ITV K-12 project modeling a program used in Minnesota. Via fiber optics, the schools shared classes, which allowed more electives for the students. Following the success of the pilot project, The Missouri Valley Communication Cooperative (MVCC), which included Underwood, Washburn, and Bismarck, adopted the program. William Strasser, the principal for Underwood, noted that the small schools were frustrated with the lack of electives available to students especially for juniors and seniors. "Sharing classes and teachers with the new technology of fiber optics expanded their choices however due to the limitation on fiber optics they could only branch out 35 miles" (W. Strasser, personal communication, February 12, 2011).

Parents and boards members in nearby towns took notice to the growth in courses available

to the students involved in WRITC and MVCC. However, expansion to other areas was restricted due to mileage of the fiber optics. The cost to the schools was very high and E-rate was not available for funding as it is now.

*The summer of 1992 became a time of major construction for the newly formed WRITC/MVCC. The North Dakota ETC (Educational Telecommunications Council) had approved grant proposals, which funded four additional studios. Funding was also provided for the Interlink between the West River and the Missouri Valley Cooperatives as well as a link with the North Dakota IVN (Interactive Video Network). In the summer of 1994, the I-94 cluster (Hebron, New Salem, and Glen Ullin) joined the WRITC/MVCC system, which prompted a name change to the Great Western Network (GWN) (Strasser, 2011b).*

Strasser became the director of the GWN, which is presently the largest ITV K-12 consortium in the state of North Dakota.

*In 1990, 10 North Dakota State University campuses and the North Dakota State Capitol were connected through the North Dakota Interactive Video Network (IVN). The United States Department of Agriculture's Rural Health Project had provided approximately one half of the funding to establish the North Dakota Interactive Video Network. The purpose of the grant was to offer nursing, social work, and medical technology degrees to people unable to relocate for the required education as rural hospitals were experiencing shortages of qualified personnel. The IVN was only a first step in creating a statewide network of video centers. Expansion of the system to serve state agencies, the public, as well as elementary and secondary schools are among the ISD's (currently ITD) goals (Rostad, 2003b, p. 3).*

K-12 consortiums continued to grow and the Education Telecommunications Council funded

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