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Integrating Interactive Video Network Technology (IVN) With Resources on the Internet to Teach Distance Education IS Courses

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Introduction

The primary purpose of the workshop is to outline a course framework that integrates IVN technology with resources on the internet to teach distance education courses. The framework is currently being designed around an introductory course in information systems which will be taught from two sites. The framework will be generalized so that other information systems courses can be designed using its underlying ideas. The framework will include course outlines, suggestions for designing course materials, logistical issues (conveyance and collection of class materials to/from remote sites), sample teaching session protocols, presentation styles, fallback guidelines (in case the technology fails), and performance assessment. This research will incorporate literature from the areas of learning theory, instructional design, telelearning, distance education, and the internet. The proposers will share their experiences in designing such a framework. Not all courses are suitable for distance education. The proposers will discuss the suitability of different courses which have been suggested in the new IS curriculum.

What is Distance Education?

Distance Education/Learning incorporating one type of technology or another has been used by most institutions as a means of offering education, for the past few decades. Distance education refers to a system that links instructors and students, usually in different locations, via technology that allows for interaction. The migration of the population from urban areas to far spread suburban locations, the growth in the population, the improvements in telecommunications technology, the increasing costs of higher education, and the cost-effectiveness of distance education, have made distance education a viable and real alternative system for offering courses. Initially, universities offered courses (degree programs) via mail. Students and instructors interacted with one another using the mail system and telephones. With improvements in telecommunications, audio and video technology, instructors have started using

Interactive Video Networks (IVN) to teach courses. Some institutions like the Open University in United Kingdom use resources on the Internet to offer courses.

Relevance of Topic to IS Academics:

Presently, quite a few educational institutions offer information systems courses as a part of their distance education curriculum. Information technology (IT) has made very important contributions to the technological innovations that have enhanced the quality of distance education. Hence, academics in the information systems area have a dual role to play. They have to learn and incorporate these technologies in their distance education courses in order to teach them effectively. Secondly, since most of the new technology is IT oriented, the IS department is expected to be the harbinger in introducing such courses. This workshop will (hopefully) aid the IS academics to fulfill such expectations.

Interactive Video Networks (IVN):

An IVN is a two-way multimedia communications system that can be used to transmit both sound and images between specially designed and equipped classroom sites (taken from Faculty Guide, UMUC). Students and instructors at two or more locations can see, hear, and interact with one another via cameras, microphones, and monitors. The sites are linked via digital telephone lines. Distance education courses in most universities are currently taught using variations of this technology. IVN allows real-time communication between instructors and students at remote sites. Instructors can also transmit images of teaching aids like transparencies, newspaper article clippings, three dimensional objects etc., via the IVN. IVN and related technologies have several shortcomings. IVN allows only limited interaction between instructor and students due to high cost of telecommunications lines. The telecommunications line is usually leased only for the lecture period. There exists almost no interaction between students at various remote sites. Instructors also encounter logistical problems in conveying instruction materials (assignments, exams) and collecting them from students from remote sites. There is also a need for robust backup plans in case the telecommunications lines fail. Resources are available on the Internet that will help overcome some these limitations.

Teaching using IVN is a different experience for instructors. Instructors have to familiarize themselves with the technology in addition to the course material. Some instructors find the technology to be intimidating. Teaching a distance education course requires a lot of advance planning on the part of the instructor. Design of the course, presentation styles, physical appearance of the instructor etc. are, very important aspects of a distance education course. Research in the learning theory area provides guidance on these issues. Instructors also plan the logistics, and backup packages (assignments) in case the equipment fails.

The Internet:

Some of the shortcomings of IVN can be overcome by integrating some of the resources on the Internet in distance education courses. The Internet is a network of networks that

links thousands of computers all over the world. Resources on the Internet include Telnet, File Transfer Protocol, Gopher, IRC (chat system), Email, Listservs, and the World Wide Web (WWW). Instructors and students can communicate with each other during non-class hours using Email, Listservs, and IRC. The instructor can make course materials, sound/video clips of important lectures, and lecture notes on the internet. Students can access these materials using a WWW browser. Students can also take exams on line by filling out forms on the WWW.

Outline of Presentation

This presentation will provide an introduction to Interactive Video Network (IVN) technology. The benefits and limitations of IVN as a tool for distance education will be discussed. Next, the various resources that are available on the internet will be outlined. The ways in which the resources on the internet will help overcome some of the limitations of IVN. A course framework will be proposed. This framework will integrate IVN and resources on the Internet to effectively teach a distance education course in information systems. This framework is based on literature in the areas of learning theory, teleteaching, and distance education. This framework will include suggestions for developing course materials and providing online access, presentation styles for instructors, sample teaching protocols, logistical support for conveying and collecting materials, and backup plans in case of failure. Methods for evaluating the effectiveness such a framework will also be discussed.