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INTERACTIVE DISTANCE LEARNING AS A TOOL IN A COLLEGE'S THEORY AND PRACTICE

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ABSTRACT

The impact computers would have on learning has been expected for years. The surprising factor has been the depth of the impact. The introduction of concepts and technology like the Information superhighway, bulletin board, internet, and interactive multimedia have made possible experiences that were unheard of five years ago.

INTRODUCTION

Interactive distance learning is a major teaching/learning tool in today's colleges. Universities have embraced this technology as a link between teachers and students in a wide range of experiences. This paper describes the concept of interactive distance learning and the experience at a university in the southeast.

History

Since 1985 there has been a considerable interest in using technology to teach students at distant sites. These efforts have used such terminology as telelearning, distance learning, computer-telephone education, and computer-facilitated teaching/learning. The technology has changed in the past ten years and has produced varied effects. Our University has used interactive, two-way, full motion compressed audio/video since 1992 to teach classes throughout the state. The major impetus for this was the reduction of telephone rates state-wide.

Although the technology has changed, the concept of distance education remains the same with learners at a distant site from the instructor. Computers allow courseware development, data storage and transmission, and interaction of the instructor with the students (Kaye, 1988). Many colleges and universities across the country are using the television technology to link educators and students. In some situations students may be able to complete part or all of a degree utilizing this technology.

Interactive Distance Technology

At our university, the interactive distance learning equipment includes microphones, cameras, television monitor, fax machines, video recorder, telephone lines, and computer control equipment. Cameras produce a picture quality that is nearly as good as network television broadcasts.

Pedagogical Concerns

Teaching in this environment offers more challenges than most instructors can comprehend without exposure to the actual teaching environment. The Instructor must have eye contact with the class at the broadcast site and maintain eye contact (via the camera) with the distant site. This skill forces the Instructor to be more aware of eye contact, and this may improve teaching skills in the conventional classroom. The students at the distant site are more prone to take a nap unless the instructor is dynamic in the classroom presentation. Another opportunity is for the Instructor to utilize more experiential and interactive teaching processes. One challenge is to utilize the distance learning equipment to let students at the various sites interact via the audiovisual mode. Consequently the students become more friendly and are apt to engage in discussions with each other. In one of my first exposures to the equipment, another instructor's final class for a semester involved a pizza and soda pop party where the students were having a very active session of wishing each other "Happy Holidays" for the Christmas break. This event immediately preceded a policy change that required no food or drink be brought into the classrooms. In any event the classes must be more dynamic to keep the attention of the students at the distant site.

The instructor is somewhat restricted in their movements about the classroom. The authors appreciate walking about the classroom during the class period. This behavior must be limited to the range of the camera and initially seems confining, but as the opportunities are opened in this environment, certain constraints must be accepted. Another limitation is that the technology can only encode the audio-visual signal to digital format in a half second. The subsequent decoding from digital format to audio-visual format requires another half second. The students at the distant site can be asked questions, but due to these two one half second delays and two other half second delays to transmit their responses back to the instructor, there is physically no way to respond to the question in less than two seconds. The Instructor must become cognizant of this delay, plus any delay for the students at the distant site to formulate their answer. Again this may be an opportunity to develop skill in waiting for our students in conventional classrooms to be given more time to formulate their answers before the instructor volunteers the correct answer. Another point emphasizes etiquette of camera control: the camera should never zoom in for an extreme close-up view of a single student. This is sometimes unnerving even for some students who are extroverted. Introverted students are simply terrified in such a situation. Instructors are sometimes encouraged to diet after

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seeing themselves close-up on television. Mother point of etiquette is for the instructor to inform the distant site if a new person enters the classroom off-camera. This allows the distant students to be aware of who is apt to hear and see them. The instructor has to make special plans to accept homework and examinations from the distant site. At some point, instructors are encouraged to visit the distant site to develop rapport with the students and teach the class from the site that normally is the receptor site. This also helps the students at the site that is normally broadcast site understand the situation of the students at the distant sits. Subsequent visits reinforce these experiences and aid in student-to-students relations as well as faculty-student relations. Any improvements in these relations improves the interaction that these distant classrooms demand. Finally, the Instructor must be flexible in teaching since there are times the telephone lines may fail. Lightening frequently disrupts communication on our University's system during spring months. These interruptions currently must be accepted and dealt with by the instructor. Our University has a technician on call for this equipment to aid faculty in resuming communication.

From a pedagogical perspective the equipment can be utilized to bring speakers top classes from the distant sites. Our university is located in rural northwest Tennessee. Many special speakers can be broadcast to classes from the metropolitan areas by having these speakers visit the distance learning sites in the metropolitan areas. The students are allowed to hear, see, and interact with these speakers almost as if the speaker was in the classroom. Again to facilitate smooth Interactions, both the students and the speaker have to be apprised of the two-second delays mentioned above. At our University this is a particular opportunity for day classes because primary utilization schedule emphasizes night classes so the equipment is usually idle most of the daytime hours.

To facilitate the students' interactions in the classes, several suggestions are made at the beginning of each semester. First, the students are advised as to the sensitive nature of the microphones and the clarity of the digital technology. Students can virtually whisper and at times the equipment can pick up this signal and broadcast it to the site of the other class. Students are reminded of the US Sprint advertisements demonstrating the drop of a pin being transmitted coast to coast. The microphones require a student to depress a button to activate the microphone, but an inadvertent pressing of a button can occur by a book or notepad coming in contact with the button. Second, the students must be aware that in some instances books or notepads can obscure the microphone and Impair transmission of the message to the other site. Third, when asking questions or otherwise interacting with the other site, the students need to identify themselves in a clear, normal tone of voice, such as, "This is Nancy in Maryville, and my question is ?" This allows the cameras at the distant site to turn to Nancy and the instructor has better awareness of the classroom environment. Fourth, the students must be

encouraged to not be shy of the equipment the "extreme close-up" concerns mentioned above must be repeated to ensure that students' concerns are reduced. Fifth, the students must realize that they will not see themselves on camera, even if they are speaking. The class will continue to see the other class on the monitors in front of them. Sixth, the students must be courteous and observe the two-second delays mentioned above. Seventh, it is helpful if students are required to write their classroom location on all assignments that are presented to the Instructor.

Opportunities, Threats, and Attitudes

Most strategic management texts suggest that any opportunities can be seen from different views. Many colleges and universities across the country have embraced this technology to link education to their students. The formats and offerings differ. In some cases students can complete interrupted degrees or earn degrees in their entirety. Sparsely populated areas can be reached much easier than before. This is particularly helpful in such areas as nursing where rural hospitals provide equipment for local nursing students to complete degrees and remain in the rural areas. Nurses trained like this are less apt to move to other hospitals. This stabilizes the workforce for the hospital.

Some consortia have developed between universities that can gain breadth of programs by sharing instructors via interactive distance learning equipment and all the schools involved have better offerings. These consortia share funding across the universities involved and therefore share the risk of the new technology. One such program occurred at our University when our small satellite program could offer a specialized course to the main campus of the University system.

There are also threats from the new technology. Our University received an offer from another university to offer an MBA program specializing in direct marketing on our campus utilizing our equipment. The School of Business currently offers a general MBA and this could have been seen as an opportunity to enhance our offerings. In this Instance, this was seen as a threat and the offer was declined. Interestingly, the lectures would have originated in Scotland. Global competition has become a threat in education through interactive distance learning

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