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Issues in Distance Education

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Issues in Distance Education

Abstract

The world of education has undergone many changes in the past 100 years. Education was thought of as an orderly world where individual students learned discrete facts within separate courses that were organized into disciplines. One of the major changes that is currently taking place is one of physical space. In the past, students went to school. Today, school is coming to the students.

ISSUES IN DISTANCE EDUCATION

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CHAPTER ONE

Introduction

The world of education has undergone many changes in the past 100 years. Education was thought of as an orderly world where individual students learned discrete facts within separate courses that were organized into disciplines. One of the major changes that is currently taking place is one of physical space. In the past, students went to school. Today, school is coming to the students.

Distance education is a system of delivery whereby the students and teachers do not have to be together in the same physical space during instruction. Distance education is not a new concept. Print-based correspondence courses have been in existence for more than 200 years (Findley & Findley, 1997). While many courses continue to rely on the postal service for delivery of materials between teacher and student, technologies such as audio, video, telephone lines, fiber optic cables, and computer networks are changing the face of distance education.

The new technologies have increased access to distance education for many people. It is now possible to take courses online to complete a high school, undergraduate or graduate degree, without ever leaving home (Electronic High School - GCSD, 1998; Open University, 1998). With so many people depending on distance learning as their primary source of education, it is important to look at the issues carefully. Some of the issues that will be examined are: the purposes of distance education; types and uses of

distance education delivery systems; the planning, design, implementation and evaluation of the courses; the nature of interactions that occur in a distance education setting; and copyright issues.

The purpose of this paper is to review the literature regarding distance education. The information will be organized around the following important issues for teachers and students: distance delivery systems, purposes for distance education, design of distance learning, interaction systems, and copyright. Two specific examples of existing programs will be described and recommendations for the future of distance education will be made.

CHAPTER TWO

Literature Review

The literature concerning distance education is broad. The purpose of this paper is to review the literature and organize the information around the most important issues for teachers and students.

Distance delivery systems

The terms distance learning and distance education are sometimes used interchangeably. Because learners are in control of the learning, while instructors or institutions are in charge of the delivery of education, distance learning takes place because of distance education (Steiner, 1998). Distance education can be divided into two very broad categories, synchronous and asynchronous.

Synchronous refers to the learner and teacher participating in the instruction together, at the same time. Because it is still at a distance, they would be separated by geography. Some forms of synchronous delivery include interactive television, audiographics, and computer conferencing. The biggest advantage of synchronous delivery is that interaction is done in real time. Discussion, questions, and feedback flow back and forth much like a face to face dialogue. The biggest disadvantage of this mode is that it may not be convenient for all parties to meet at a specific time.

Asynchronous delivery systems are not bound by a specific time or place. Teachers deliver materials and instructions at various times, while students participate in

the learning activities when it is convenient for them. Some examples of this delivery mode are print-based correspondence courses, audiocassette or videotape courses, email, listservs, and World Wide Web (WWW) based courses. The biggest advantage of this delivery system is the convenience. Students and teachers do not have to travel over distance, or schedule the instruction at a specific time. The biggest disadvantage may be the time it takes for interactions to be completed. This was especially true in the past, when delivery depended upon the postal service. With the high speed of today's computer networks, a reply to an email may be returned in a matter of minutes.

Purposes for distance education

There are many purposes for distance education. From the perspective of the student, learning at a distance fits the schedule of more working adults who are seeking to continue their education for career advancement or to change careers (Barnard, 1997). It also provides a way to get a degree from a prestigious school in another part of the world for less than it would cost to actually live there as a resident student (Ebeling & Gubernick, 1997). Some businesses are finding that distance education is more cost-effective for training of executives than to send them off to a school (BYTE, 1995). For younger learners, distance education can help students in rural areas where resources are scarce, students with jobs, high-achieving students who want to graduate faster, or students who just don't fit into the mold of a regular high school (USA Today, 1997).

From the point of view of the providers of distance education, it makes sense from a financial perspective. According to Barnard (1997) "Many universities and colleges are placing an emphasis on distance education ... as a method of reining in the costs associated with expanding and maintaining an increasingly expensive campus infrastructure" (p. 30-31). The combination of factors such as large metropolitan areas separated by hundreds of miles of sparsely populated rural terrain, along with a rapidly growing population and an expanding technology-based industry has led the governors of 18 western states to tackle the problem of distance education in a collaborative way. The Western Governors University is a learning institution without walls (Western Governors University, 1998). Some educators view the purpose of distance education as a way to investigate new possibilities for teaching and learning (Muffoletto, 1997).

Design of distance learning

A major issue surrounding distance learning is the design of the instruction. Powers (1997) stated, "When courses are being delivered over a distance and particularly over the Internet where face to face contact is not possible, it is critical that a course is well-designed in order to have the maximum impact on the participating students" (p. 194). The aim of distance education is to provide good instructional experiences for students. But quality instruction does not happen on its own, it is the result of solid instructional design (Berge & Collins, 1995). The major instructional design elements of traditional education

can be implemented for a distance course, as well (Dick &
Carey, 1990).

The teacher of the course should be actively involved in
the process of the instructional design, including the
analysis, design, and evaluation phases. It is always
important to focus the goals of the course upon the needs of
the students. Especially in a distance learning situation,
the learners may have varying levels of experience or special
needs. In a technology-intensive format of delivery, there
may be prerequisite skills that students must have in order
to be successful. Issues of access to hardware, software,
and connectivity must also be addressed. Careful
consideration must be given to the instructional goals and
objectives of the course. Teachers must be sure that
curriculum is driving the use of technology.

The instructional strategies must support the type of
learning that will reach the planned objectives. Especially
in distance education, the tasks that are assigned students
depend heavily on the effectiveness of the delivery medium.
It is important to fit the technology to the task (Ahern,
1996). Research into instructional systems and technology is
providing information about the most effective combinations
of media and methods for learning under different conditions.
This provides educators with new tools to use to enhance
learning. But it is important to remember that technological
tools are not the only ones available, and in fact may not be
the best learning tools for any given task. Effective use of
technology does not lessen the central role of the teacher in

making good choices about instructional methods while guiding the learning process (Ellsworth, 1997). In the process of changing how instruction is delivered to learners in various settings, teachers must learn how best to use the technology. Instructors must avoid the temptation to simply place new tools into the existing models of education (Talley, 1997).

Within the design and implementation phase of instructional development, educators must also consider the teacher training that will be necessary for effective distance education. Teachers who are excellent in a regular classroom setting do not always perform as well at a distance (Martin & Taylor, 1997). More advance preparation will be required of teachers who are new to the various distance education formats. They may need specific training to effectively use the technology tools required. Even more routine matters will need consideration, for example it is not as simple to prepare and distribute materials when you do not meet with students at a regularly scheduled time and place. Contingency plans must be thoroughly worked out in the event of technical difficulties. Another consideration is that the lack of face to face contact within the same physical space creates the need for different kinds of interactions. Teachers may need to replace traditional styles with computerized lecture material in the form of slide shows or text to be downloaded and printed by the learner at a distance. While instructors need training and adjustment to perform well in a distance environment, this type of experience almost always leads to improvement in the

teacher's traditional classroom approach as well (Martin & Taylor, 1997).

Evaluation of the entire learning environment in distance education is of primary importance, just as it is in traditional classroom instruction. According to Chen (1997) "The spirit of formative evaluation as monitoring feedback, control, and correction should permeate the entire system of distance education continuously and comprehensively" (p. 35). Assessments of student learning must be carefully planned to coincide with the instructional objectives. There may be some technical considerations to work out regarding interactive testing or performance based assessments (Dickinson, 1997). An ongoing formative evaluation process must be in place to look for ways to improve the instruction. An attempt should be made to field test instruction with a small group before initiating widespread use of the design. Instructors must provide for ways to get continuous feedback from students at a distance, such as electronic journals or computer conferencing (Powers, 1997).

<u>Interaction systems</u>

The issue of interaction or communication is one that is mentioned in nearly every piece of literature regarding distance education. One way to categorize types of interaction is suggested by Logan and Repman (1996): learner - content interaction, learner - instructor interaction, learner - learner interaction, and learner - interface interaction.

Learner - content interaction refers to the way the student processes new information, and connects it with previous knowledge to create new learning. One of the barriers to this type of interaction may be learning style. Distance education materials can be provided using a variety of media, including audio, video or print with various types of computer manipulation or interaction. Individual students can often choose a type of delivery that is well-suited to their own learning style. Another barrier to learner - content interaction is the student's perception of the relevance of the content. This is true in any type of educational setting. As in traditional classrooms, teachers in a distance education environment must make the effort to assist students in connecting content with relevant life experiences (Logan & Repman, 1996). This may be done by using email, listservs or chat to respond to case studies. Instructors can provide links on the web to an enormous number of relevant books, journal articles, government documents, etc. Teachers should also make themselves readily available for discussions with students regarding the relevancy of content.

Learner - instructor interaction is an important component of distance education. Increased communication between teachers and students has been one of the driving forces leading to new technologies being used in distance education. The instructor is responsible for guiding the learning of students as well as being the human link in the learner - content interaction process. Both students and

teachers must learn to take risks and spend time getting used to a pattern of communication that differs from face to face interaction within the same room. Teachers must provide positive trust-building activities early in the learning experience. Introductions can be used to attach a personality or a face with a name by providing information about family, hobbies, career goals or other personal information. This can be done within every mode of delivery (Logan & Repman, 1996). As teachers operate within the role of director of learning, they must provide prompt and constructive feedback to students on an ongoing basis. They can also allow students to play a role in setting learning goals for themselves.

When students interact with other students, they increase their active participation in the learning. This type of learner - learner interaction is important in building a learning community, but it does not always happen naturally. Instructors must provide ways for students to become actively involved so that they can "overcome the absence of a shared physical location, deal with time differences, and cope with diversity" (Logan & Repman, 1996, p. 37). Use of email, listservs and chat can help overcome a sense of isolation and enhance a sense of community. Students have reported that computer conferencing provided a good way to get to know one another, as well as working collaboratively on group projects (Cathcart, Murphy & Kodali, 1997).

Learner - interface interaction refers to the ways in which students deal with the delivery system or technology. In order to make the delivery as seamless as possible instructors and students must become comfortable with the technology, as well as having a good task-to-technology fit (Ahern, 1996). This can be accomplished by good training and experience. Instructors may need to provide online tutorials, written or video support materials. It is also helpful not to put too much emphasis on technological toys. The technology is just another learning tool, and must be used appropriately.

Trentin (1996) has described the term logical communication structure to mean "organizing basic telecommunications services (email, file transfer, etc.) offered by Internet service providers so as to respond to the aims and typical requirements of a group working on the net" (p. 19). This structure typically involves a means of allowing group members to work with one another, such as email, listservs or electronic boards. Another element is a shared information space where group members can come together. There is a whole category of software known as groupware, which offers scheduling of online meetings, various forms of asynchronous interactions, and collaborative document creation and editing (Lamb & Schrum, 1997). This can be a successful distance education tool, when teachers take the time to determine how the dynamics of interaction will affect the learning experience.

Effective interaction does more than enhance the learning experience while students are in a distance education course. Hesser & Kontos (1997) also report that "telecommunication appears to have had a marked influence on the development of personal relationships" (p. 259). The findings of their study show that students' use of telecommunications within the context of distance education led to the development of personal relationships with colleagues who were not a part of their courses. This influence was evident in the professional networking of the students as well.

Different types of interaction modes have different advantages for distance education students. Synchronous communication, such as computer chat or two-way video/audio provide real time interaction that can increase a sense of community and promote collaboration (McIsaac & Ralston, 1996). This type of interaction can also help students feel connected and allow them to get answers to questions quickly. Instructors can hold weekly electronic office hours, so that students will know they always have a time and place to communicate directly with the teacher.

Asynchronous interaction modes also have advantages. Many students report that they like having the time to reflect on the ideas of others before formulating their own responses. The fast pace of synchronous communication can lead to some voices not being heard at all. Some students have reported that the interactions experienced in asynchronous computer conferencing were actually of a higher

quality than interactions in a traditional on-campus classroom (McIsaac & Ralston, 1996). Students have also stated that being freed from time and place restrictions offered a sense of control and autonomy that was reflected in their interactions (Cathcart, Kodali & Murphy, 1997).

While many teachers and students in distance education feel that some face to face contact would be valuable, they also report that they learn as much or more using the distance format as opposed to a traditional setting (McIsaac & Ralston, 1996). Regarding the issue of interaction, Burgstahler (1997) stated:

> I cannot deny that something of value is lost when you give up the face-to-face interaction between instructors and students that occurs in traditional classroom instruction. There is no way to replace this aspect of instruction electronically, but the increased opportunities for interaction via electronic mail help to compensate for this disadvantage.(p. 64)

Copyright

A final issue to be discussed concerning distance education involves copyright issues. There are no minimum copyright guidelines for the emerging field of distance education. Teachers and students are forced to balance their rights to access and use of copyrighted material with that of authors, but without formal guidelines (Stansbury, 1996). It is important to keep in mind that the rights of authors over their creative works must be respected. If a question arises about the use of copyrighted material within the parameters

of distance education, the best course of action would be to ask the copyright holder to grant permission for the rights.

<u>Distance education examples</u>

Within the literature, numerous examples of distance education programs can be found. Two programs will be discussed as illustrations of success within this field.

Colorado State University has developed a Community College Leadership program that connects students at two distant sites with on-campus students at CSU. This program uses a combination approach to distance education. Much of the instruction occurs over electronic media, including two-way compressed video that links all three sites, as well as use of the Internet for communication and document delivery. A central element of the program is the organization of students into site-based cohort groups. "It is the cohort that provides the nucleus for work on leadership and team-building skills; provides a safe environment in which to risk new behaviors; and provides the positive peer pressure, reinforcement and support critical for successful completion of a doctoral program" (Davies, 1997, p. 66). The cohort groups came together at each of the three sites once each week for 12 weeks. The sites were linked by the two-way compressed video, and met for 90 minutes of interactive instruction. In addition to these session, the entire group met on campus for face to face interactions one Friday each month.

The designers of this distance education program credit much of its success to this combination of delivery styles.

The electronic instruction reduced the amount and distance of regular driving time, allowing some students to participate who would not be able to drive to campus on a weekly basis. Interactivity and connectedness was still maintained throughout the entire group using the two-way compressed video and the Internet. In addition, students built and maintained strong relationships and support among their cohort groups, which met weekly. Finally, the instructor was able to meet each student face to face in the monthly large group sessions. These meetings were held at each of the sites at least once. This method of delivery used the best components of distance education and face to face interaction to provide a model that is both humanistic and efficient.

At Carnegie Mellon University in Pittsburgh, a tool called the Electronic Issue Forum is being used to give students experience in writing persuasive and balanced papers, and to do this in a distance education environment (Peha, 1997). The forum is part of course for first-semester college freshman. Even though they are are all students enrolled in the same class at the same university, they are not all in the same section. In this model, the use of the electronic forum is not for the convenience of bridging distance constraints. It is because the method of interaction is strictly written, which is the core of the class. At the beginning of the Electronic Issue Forum, each student chooses a role in a given controversial issue. The roles vary a great deal, but each role is one of two types: partisans and decision-makers. Decision-makers must

eventually make a balanced decision that considers the needs of all parties. Partisans argue from the point of view of a particular group, and their job is to influence the decision-makers. Partisans must do outside research for evidence to support their arguments. Decision-makers rely on input from the various partisans instead of doing their own research. Each student must play the role of partisan in one forum and decision-maker in another.

As partisans take on the role of a stakeholder in the controversy, they do their research and begin posting positions in the newsgroup set up for the forum. They must use facts to support their arguments, and try to persuade decision-makers to take their position. Partisans from different perspectives can also comment upon the positions of other partisans as they are posted, leading to electronic debates. Meanwhile, decision-makers are reading all of the partisan statements. Each decision-maker is required to comment on the status of the debate at some point, and each has a different deadline to do this. In this posting, the decision-maker must list the positions that have been stated so far, and must comment on which are the most compelling arguments for each group. The decision-maker also points out any critical issues that have not yet been fully addressed.

Finally, there is a deadline which ends the partisan debate, and decision-makers are required to submit a balanced evaluation of the issue. In their decision, they must give reasons behind their actions, relying only upon the research as presented by partisans. With students exchanging so many

ideas in writing, they learn much from each other by example. Learners see good examples of persuasive arguments and balanced evaluations, as well as less articulate examples. Students are motivated to come up with research that is solid, and to write well because they know their work will be read by their peers. Instructors felt that the use of computer networks for this experience had several advantages over face to face meetings. The first is that students and instructors can communicate with each other asynchronously. This allows for individuals to determine the best time and place for interaction. By using the network, complete records of all interactions are created and stored automatically. The records can be used for later student reference, and for grading. Finally, the lack of visual cues and synchronous interaction allows all voices to be heard equally. Even shy students can participate fully, without being drowned out. The designers of this course feel that it has great promise as a vehicle to promote student interaction.

CHAPTER THREE

Conclusion

The global telecommunications network is changing the way people think and learn in ways that can only be compared to the changes that came about after the invention of the printing press. As education approaches the twenty-first century, it is more important than ever for us to learn from our past experiences and have a vision for the future.

The work that has been done so far in distance education can teach us many lessons. The most important of these is that no amount of technological wizardry will substitute for solid instructional design. We must resist the temptation to rush into distance education without allowing time for proper planning. Anything we can think of can probably be accomplished, so it is important to think carefully. The quality of the technology that is available for use in distance education will increase regardless of what educators do. We must put our efforts into developing creative and comprehensive learning environments.

Another lesson that can be learned is that human interaction is an important component of human learning. We must view online education as more than a way to improve learners' access to information and knowledge building. If we use our network connections right, students can be empowered to become better thinkers, learners and problem solvers. We must plan to improve communication skills and team-building techniques as more and more people learn within a global classroom.

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