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TRAINING TEACHERS OF DISTANT LEARNERS

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ABSTRACT

Distance Education increasingly is being utilized as an instructional method within the college environment. It has several advantages, among which are that it enables course participation by

- * Handicapped persons whose problems of speech, hearing, or movement may make spontaneous interaction with others difficult;
- * Geographically or temporally isolated persons;
- * Those whose language differs from that of the instructor;
- * Instructors who have special knowledge that would otherwise be impractical to teach due to the scattered locations of those interested in the material.

However, this method requires instructors to adjust to many factors that have little relevance in traditional teaching methods:

- * The absence of face-to-face communication with the learner limits semiotic cues often used by teachers as feedback mechanisms to the efficacy and quality of their teaching;
- * Evaluation of students' engagement and level of performance becomes more limited, forcing the instructor to rely upon written communication as the major, if not sole, method of judgment;
- * Extraneous factors such as typing speed and skill and degree of student access to the mode of communication may influence teachers' judgment of student performance.

Rochester Institute of Technology offers more than 140 courses through Distance Teaching. Methods for ameliorating these problems currently used by RIT are discussed, as well as practical experience by the author garnered from having taught Distance Education students for the past three years.

KEYWORDS: Distance Learning, Distance Teaching, Distance Education, Training, Teachers

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INTRODUCTION

Within a relatively short time, Distance Education has emerged from the twilight zone of correspondence courses and "mail-order" degree mills to its present position as a respected component of a university teaching mix. Rochester Institute of Technology for example, offers more than 140 courses through Distance Teaching. Methods and this paper presents some of the information gathered by those who are in charge of the program as well as practical experience by the author garnered from having taught Distance Education students for the past three years.

Some authorities have even stated the belief that "...most of higher education, at least in part, will take place off-campus in a university without walls" (Cantelon, 1995, p.5). So radical a change in teaching climate naturally entails modifications in the training of teachers for this style of communication, which requires different techniques and emphases than lectures or in-class discussion.

What is Distance Education?

Distance Education has been defined as "...instruction that (1) is delivered other than where the instruction originates, (2) has an interactive component, and (3) has a structure that includes assessment" (Rogers, 1995, p. 6). In essence, then, any method of teaching where there is little or no physical contact between the instructor and the student can be termed "Distance Education".

B.C. -- that is, Before Computers -- the only practical method of educating at a distance was by written correspondence between an instructor and a student. Postal mail had limited appeal due to the long delays between contacts of teacher and student and the lack of any mechanism whereby students could respond to each other. The sine qua non of successful teaching is immediacy in feedback to students on their degree of understanding of the material and interaction among students as well as the student with instructor. Increased feedback almost always improves learning and performance (Lee & Carnahan, 1990), whereas long-delayed feedback and lack of

interaction often is useless both in correcting errors and in motivating students to continue with their studies.

The advent of modern technology has changed the situation drastically:

- * The computer allows immediate interaction between instructor and distant students, as well as interaction among all the distant students participating in a course through the medium of electronic-mail (email).

- * The VCR permits cassettes of visual material (movies, slides, demonstrations) to be pre-mailed to students to be easily viewed within the home environment and therefore permits common visual experiences which can then be discussed by email.

- * Interactive video permits classes to be conducted in remote locations with real-time instruction taking place, enhancing instruction in areas like medicine where an operation can be discussed as it is occurring.

The exact description of Distance Education methods is necessarily transient as technology progresses exponentially. Distance Education has been conducted through printed matter, audiocassette, telephone, microwave and radio broadcasting, phonograph record, compact disc, broadcast and cable television, videocassette, mainframe and microcomputers, interactive videodisk, and the internet (Verduin & Clark, 1991), Just as the audiocassette made the phonograph obsolete, so the ongoing rapid technological development of the internet is making VCR cassettes obsolete -- it is now possible to access audio, pictures, and movies directly on the net to be downloaded and viewed on student computers at leisure, thus permitting frequent updates of material without the difficulty and expense of re-recording VCRs.

However, although the methods of student-faculty interaction may change, the skills required of a good Distance Educator can be expected to be relatively permanent and those skills are what I will discuss in this paper.

Since there are many variant methods that fall under the rubric of distance learning, I will limit my discussion to the one I have personally used: a class conducted by assigning students textbook assignments, auxiliary materials, and VCR tapes or viewing of cable

broadcast of the same tapes, to be read and viewed by a fixed time, with discussion following over a series of days. Class discussion are conducted through a program such as DEC NOTES which permits students to log onto a mainframe computer for interactive discussion where they can comment on the material themselves, view comments written by fellow students, and interact with the instructor by posting comments in the open class discussion or by private email connection. This method permits the students to access the computer at their own convenience, allowing those from different time zones or work schedules to participate. The disadvantage is that the discussion is spread out over a series of days, losing the give-and-take of immediate unplanned response.

In order to discuss the modifications in teacher training that must occur to take advantage of these technologies, it is important to understand the advantages and disadvantages of distance education compared to the traditional classroom teaching.

The Advantages of Distance Teaching

** Physically handicapped persons*

There has a growing recognition throughout the world that persons who are physically handicapped should be encouraged to participate fully in educational and occupational opportunities, both for their sake and for the sake of society that otherwise loses their contributions. Traditional classroom instruction is held in a specific location, day, and time which may be impossible or inconvenient for those who are handicapped to attend. In addition, the disability may entail speech, hearing, or movement problems which slow class participation to such an extent that real-time interaction becomes problematic for the person or for other students, or physical problems which make it unpleasant for others to learn nearby. Email interaction permits the physically handicapped to participate when their schedule permits, at their own speed, and without their handicap unfairly limiting their competition with other non-handicapped students for teacher attention. For example, RIT has many deaf students attending classes through the National Technical Institute for the Deaf; in a Distance Education course, they need no interpreter since everything is printed on the screen; blind students for a relatively small expense can attach a voice synthesizer to their computer and have the discussion read to them by the computer, giving them the feeling of empowerment.

** Geographically or temporally distant students*

Many persons who might wish to acquire education or training in specific areas cannot stay in close proximity to teaching institutions or can't leave their jobs or homes at specified times during the day. Those whose employment requires their daily presence at a specific location and those with small children who must be cared for during the day share the difficulty or impossibility of physically traveling to regularly scheduled classes, while they can participate whenever their free time falls, particularly since they gain the time otherwise lost in travel. The majority of Distance Education students at present in the United States are working women employed full-time in careers and unable to leave at a fixed time to attend geographically fixed classes (Aslanian & Brikell, 1988).

** Persons with Language differences*

Persons whose language differs from that of the instructor have the potential for having someone who does understand the language interpret for them at the time they are ready to participate. A bit farther in the future, computer-interpreting programs can be expected to be more and more technically adequate particularly in circumscribed technological fields or areas of study, and can be anticipated to continue to improve as compression technology and memory expansion permits more elaborate programming techniques.

** Expansion of teaching opportunities*

Some areas of study have so limited an appeal that few students are available in any one location although a sufficient number for economically viable courses may exist scattered over a wide area. Distance teaching permits an institution to offer these exotic courses to these scattered students, enabling expert instructors to communicate their knowledge where it might not be practical in any one site.

The Disadvantages of Distance Teaching

There are some disadvantages to Distance Education, however, and these must be recognized lest one think that it is the solution to all problems.

** Absence of face-to-face interaction*

Teachers normally observe students' body posture, voice intensity, response hesitation, and similar semiotic cues to infer whether their teaching is achieving desired goals. The lack of this contact limits these cues and tends at the course beginning to make

students' responses stilted and formal, and limits the instructor's direct knowledge of the success of his communications to the students.

* *Limitations on the methods of assessment*

Instructors tend to rely overly on students' written responses, since real-time answers to questions posed by the instructor, assessment of understanding gained by immediacy in response to comments by other students, and similar inputs tend to be negated by the distance teaching method.

* *Extraneous factors can enter into judgments of student performance*

Students may contribute less than they usually would due to lack of or slow typing skills, lack of access to a computer and/or modem at times when they need them, or inability to express in writing concepts or ideas that they might be able to communicate verbally. Home testing offers all the opportunity for cheating and/or plagiarism that all take-home tests do.

Despite the disadvantages, most students who have taken Distance Education courses report themselves satisfied with the method and having acquired at least as much knowledge as they have in similar lecture/discussion courses held on campus. In fact, according to Freedman (1987, p 170), "The single most important determinant of quality in continuing higher education is its faculty" .

Peter Drucker is said to have remarked that "Faculty had been tremendously inventive of ways to avoid the positive impact technology could have on education..." Cantelon (1995, p. 6), who continues "As faculty perhaps intuitively senses, a university without walls quickly becomes one in which the lecture method is made obsolete or, at the very least, radically transformed."

Distance teaching has unique qualities that require even excellent conventional teachers to modify their techniques to avoid floundering for extended periods. The University of Wisconsin-Madison now offers a professional development certificate in Distance Education; Athabasca University in Alberta, Canada offers a master's degree specifically aimed at training teachers who will offer distance courses (Manzo, 1995). Needless to say, therefore, it is not likely that in a short address all the difference in Distance Education can be communicated; it is more of a case of *al regel echad* -- a brief summary of some of the more salient points, to help sensitize

instructors who will be engaged in Distance Teaching to some of the experiences they may realistically expect.

* *Instructor Interaction With Students*

Instruction style: Norman Coombs, a noted consultant on Distance Education, has said that the difference between a lecture class and a Distance Education one is the difference between "The sage on the stage, and the guide on the side" (Coombs, 1996). The Distance Educator will find that social roles are flattened; students are more communicative, more ready to challenge what the instructor and other students say, and in general more active in the course than in a classroom setting. Faculty must play the role of host more than that of director; dogmatic statements which may be passed by or accepted when offered verbally often appear silly when put into print. Rather, the focus of the class should be on the students and their interaction guided by the instructor rather than passive listeners, as too often occurs in a usual setting. Since the students may never physically meet each other or the instructor, it is incumbent on the instructor to set a warm, welcoming tone to the interactions or students may feel that they are broadcasting into an empty space and lose interest in the process.

Student intimacy level: Since comments can be sent to the teacher directly and responses returned to the pupil individually if either party wishes, there is an intimacy to the give-and-take that allows a dyadic interchange as well as open conversation. In my Abnormal Psychology course, for example, students have replied to a topic both formally by way of the NOTES™ program and informally by email to me with an astonishing deep level of intimacy. For example, when the topic of sexual dysfunctions and disorders is presented in a lecture class there rarely is anything personal freely offered by the students. When the same course is taught in a Distance Education format, students post and discuss openly, among other topics, their own experiences with date-rape, child sexual abuse, impotence, homosexuality, and similar issues, while email to my office often goes into even more depth on the experiences.

* Instructor Time Investment

There may be an impression that distance teaching is less time-consuming than regular teaching. This is far from the case: teachers should expect this method to absorb more of the time both in preparation and during the course than the usual lecture or discussion class.

Preparation time: Florini (1990) points out that "whether intended for electronic delivery or for more traditional means, efficient and effective instruction depends on good instructional design" (p. 384). Since students are interacting at their own speed and timing, it is essential that materials be available to them well in advance of the actual use, so they can allocate sufficient time on their own to study the material. As mentioned previously, many of the students will have full-time jobs or full-time home management and may be able to snatch time only at rare intervals to concentrate on the work required. It should be available to them when they are ready, even if far in advance of the time it is expected to be discussed. This means that the instructor must plan ahead of time almost all the materials that are to be used in the course, although of course extremely current material can be sent out by e-mail on a "read immediately" basis.

Actual course time: The most astonishing and perhaps gratifying thing for most new Distance Teachers is the increase in interactions with the students. Student will send comments by email much more frequently than they make comments in class. This is especially true of female students; studies have shown that females are inhibited somewhat from offering verbal comments in mixed sex classes, but this effect tends to disappear when the comments can be offered by email rather than in the immediate presence of the opposite sex. Similarly, students with special needs, like deaf students enrolled in my course at RIT, contribute much more when they can type comments at leisure than they do when they must first sign to an interpreter and wait while the interpreter verbalizes the comment to the class. Therefore, instructors should be prepared to receive and respond to student comments much more frequently than occurs in a lecture/discussion course. A discussion in-college course ends when classes change; a distance education discussion course is open to student input 24 hours a day! Feenberg (1995) notes that "The asynchronous character of the medium works against feeling the full force of the other. As a result, messages are frequently left unanswered without the embarrassment we would certainly feel if, for example, we picked up the phone and failed to respond to the voice at the other end of the line" (p.). The instructor must be aware of the insecurity that many beginning distance learners feel about the medium; are their messages getting through and is anyone (especially the instructor) reading them. It is particularly important, therefore, that the Distance Educator make a real effort at the beginning of the course to respond with positive comments to those who contribute

both to encourage contributions and to let the student know that the equipment is working correctly!

* Quality of pupil preparation

My experience and that of other teachers is that pupils are better prepared for distance courses than for regular courses. Perhaps this is due to the newness of the method, perhaps due to a necessarily clearer description of what the course requires and its relationship to grading, or perhaps it is due to the fact that students have more time to consider issues before making comments than they do when comments must be generated within the few minutes of lecture time. Slower thinkers are not locked out of class discussion and often participate on a deeper level, while the faster but more superficial comments tend to disappear after responses by other students (or the instructor) point out their lack of depth.

* Student diversity

Particularly at this point in time, the students who are taking Distance Education courses tend to be older and more diverse than the "traditional college student". They include some full-time college adolescents or young adults taking a course they could not otherwise enroll for, it is true; but the majority of the students differ from this. They tend to be middle-aged adults who are being retrained, either while working or after having been down-sized out of a previous job; persons who find they need a new level of skill or new degree to qualify for a promotion; and retired persons taking courses for pleasure and general interest. It therefore should not be assumed that everyone will have similar backgrounds: jokes about the campus that might evoke a roar from a traditional student will pass totally by the older person who has never set foot on the college grounds. The instructor can use this diversity to advantage in a course, by directly inviting those with practical experience in the topic to offer their observations on the theories proposed, or by harnessing the enthusiasms of the younger adults to fire the caution of older ones.

* Evaluation of Student Performance

To allot credit for a course, each student's performance must be evaluated. How the evaluation takes place will depend of course on the nature of the education offered. Instructors are urged to be creative in their evaluative methods. (A sample set of instructions for the student prepared by me for my Distant Education Abnormal Psychology course

and the evaluation for grading can be obtained by email to MJIGSS@RIT.EDU)

- These might include the traditional ones like
- * Requiring students to come in to the college for a multiple-choice or essay final exam.
 - * Assigning an essay or series of short essays to be submitted by email by a specified date (e.g., a "take-home final").
 - * Requiring work to be submitted by postal mail by a specified date (e.g., a balance sheet for a fictional business described on the computer).

On the other hand, a more creative evaluation process might be to

- * Have student essays submitted for posting on the Distance program and ask the students in the class to rank them from high to low, and assign a grade partially based upon the students' rankings;
- * Have a program automatically count the number of replies to posted topics and reward those students who have contributed the most input to the discussion (a program to do this has been written by Norman Coombs at RIT, which he shares without cost; it can be obtained by sending an email request to NRCGSH@RIT.EDU), or the best input, or the most creative input, as judged by either instructor or students.
- * Ask the students to gather material in their own neighborhoods relevant to the material under discussion, and present the material to the other students along with their explanation of how it agrees with or contradicts the course material.

Evaluation is an important part of the Distance Education experience in most cases, and giving time and effort to planning how this will take place will make the education more valid in the eyes of the students.

* Pragmatics for a successful Distance Education Teacher

As with all other acquired skills, there are heuristics that usually acquired by trial-and-error methods that will improve the performance and enjoyment of the Distant Educator. Many valuable suggestions were given by Coombs (1996), some of which are summarized here:

- * Students do not like reading long documents on the computer. If much content must be sent by email, frequently send out several related short mailings on a single day.
- * Help everyone in the group discussion to keep themselves organized. Each mailing can and should have a meaningful subject line.

* Have each student include his or her name in the mail. Not only might this be needed for grading purposes, but meaningful discussions require both the subject matter context and the personal context as well.

* Both teacher and student will need to learn how to make mail folders to keep and store the lessons and discussion. Learn how to create folders and store class materials in a logical manner .

* Your mail utility has the ability to sort incoming messages for you. Most mail systems do permit establishing filters. and will permit incoming messages to be pre-sorted into different folders, so that you can read all the mail relevant to your course at one sitting.

* Send yourself a copy of all messages you send to students, especially comments you made to students and grades you mailed . All mail systems can be set to do this automatically. It is particularly useful when engaged in a sensitive discussion with a student.

* Save material you have written onto a permanent storage medium. Once you have taught a course, much of the content can be used again, frequently without modification. Obviously, you must review the material to see which parts are still current and which must be discarded, but much of the material will be found to be re-usable without alteration.

* Make an effort to take a Distance Education course yourself to get a first-hand understanding of what is involved. By seeing mistakes that others make in their conduct of a course, you can more clearly see what you should do to fit your personality and subject matter.

SUMMARY

What then are the items that a Distance Educator must emphasize in order to succeed in the task?

* It is essential that more time than usual be put into preparing materials, class notes, questions to focus discussion, and similar teaching aides prior to the beginning of the class so that during the term instructor time can be devoted to analyzing and responding to greater than normal student input.

* The counterpart of this is that faculty must allot time every day to reading and perhaps responding to student input. Not all input must be responded to by the instructor but all should at least be read, and immediacy of feedback is essential for students to feel that they are being attended to and involved in the class.

* Clear guidelines must be established as to what material is permitted and not permitted to be posted to other students; the instructor must be alert to nip in the bud any "flaming" (derogatory or racist) input especially if the topic is a sensitive one.

* Students should be given multiple methods by which they can show class learning: the number and depth of their email input, the quality of any written assignments, and multiple-choice tests supervised by someone of authority in the area are all possibilities, as are more creative evaluative methods.

* Faculty should learn some simple techniques such as those listed above which will make the experience of teaching Distance Education courses more fruitful and pleasant both for the students and for themselves.

Distant Education is not education for the distant future; it is rather education that is occurring at present, and instructors should leap to take advantage of this new method of communicating to enable them to effectively interact with many who, because of time or distance constraints, would otherwise be locked out of the educational process. References

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