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### EDITORIAL

This is the last issue of DEOSNEWS, Volume 1. Since the introduction in April 1991, 25 issues have been published. A list of all these issues is attached at the end of this file. DEOSNEWS now has about 700 subscribers around the world. Although it can be difficult to identify which countries all e-mail addresses correspond to, a review of the subscriber list indicates that DEOSNEWS has subscribers in these 33 countries: Australia, Austria, Belgium, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Czechoslovakia, Denmark, Egypt, Finland, France, Germany, Greece, Hong Kong, India, Ireland, Israel, Japan, Mexico, the Netherlands, New Zealand, Norway, Poland, Saudi Arabia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States. Please notify mfp101@psuvm.psu.edu if there are any countries missing on this list. DEOS-L, which was announced in DEOSNEWS #17, already has about 300 subscribers. Although it has not found its final form, DEOS-L has proved that it can be a useful information channel for distance education.

This has been a year with impressive achievements for DEOS as a result of hard work and enthusiastic support from subscribers, authors, and the people at the American Center for the Study of Distance Education. A thank you, to you all and a special thank you to Philip W. Pinder, Janet L. Hartranft, Edward Desautels, Margaret Koble, Melody M. Thompson, Toni Garcia, and Michael G. Moore. Without your support, DEOS could not exist.

DEOSNEWS will be back in January 1992. Until then, enjoy many Happy Holidays

#### Morten Flate Paulsen

PS. DEOSNEWS would appreciate old-fashioned Holiday Cards from the subscribers.

### DISTANCE EDUCATION THEORY

Editorial written for the upcoming issue 5.3 of the American Journal of Distance Education.

### By Michael G. Moore

The recent publication of two books, one by Verduin and Clark (1991) about distance education and the other by Candy (1991) about self-directed learning, both of which include discussion of theoretical work that I wrote in the early 1970s, has led to the suggestion that I might summarize those theoretical ideas in this journal. I was recently invited to give a talk on the concepts of distance education at a conference organized by the State College and University Systems of West Virginia, and found a greater interest than I had expected in ideas about the conceptualization of distance education. Since it is possible this subject might indeed be of some general interest, I will proceed to elaborate on the idea of transactional distance. The subject of learner autonomy, or self-direction, will be given a minor place in what follows; perhaps we can take it up on another occasion.

Over the past twenty years I have enjoyed the interaction with colleagues around the world as we have struggled to conceptualize our new field of study; I hope that what follows will both extend interest in the subject, and also widen the circle of fellow students who will correspond about this fascinating subject.

### The Need for Theory

We must not hide the fact that there is a great deal of confusion about terminology in the distance education field. In particular the use of the term "distance learning" is troublesome since it suggests actions of one person, i.e., the learner, that are independent of the actions of teachers. Yet every so-called "distance learning" program is in fact a teaching program as well as a learning program and, therefore, can only correctly be referred to as distance education. The point is not that the concepts of distance education have not been defined and explored, nor that there is unanimity among scholars about their meanings. In this journal there have been several articles that have both contributed to the progress in conceptualization, and identified the areas of disagreement. What is needed is more discussion about and understanding of these efforts to organize our knowledge, as well as more careful and thoughtful use of terms. Understanding how we "organize our knowledge" means to understand our theory. That's what theory is: the summary and synthesis of what is known about a field. It is the reduction of our knowledge to the basic ideas, presented in a way that shows their underlying patterns and relationships. Understanding theory makes it possible for us to speak with a common vocabulary. Understanding it should have the effect of helping practitioners see where their piece of the action fits and interfaces with others and thus should lead to better ways of working with others. The theory also helps us understand what we don't know and, therefore, is the only guide to research. Research that is not grounded in theory is wasteful. It might solve an immediate problem, but it doesn't fulfill its promise. Relating it to theory, however, increases its ability to solve other problems in different times and different places. In our theorizing we rise above immediate and local concerns and find out what is general and long lasting. This gives us a broad perspective that enables us to analyze the particular instance more effectively; it helps us make decisions that are guided by fundamental teaching and learning principles rather than by the pressure of a particular crisis or the dazzle of a fresh opportunity.

#### Transactional Distance

The first attempt in English to define distance education and to articulate a theory appeared in 1972 (Moore 1972) and in 1980 was named as the theory of transactional distance (Moore 1980). Analysis of the literature that was summarized by this theory led to the important postulate that when we talk about distance education we are referring to a distance that is more than simply a geographic separation of learners and teachers. It is a distance of understandings and perceptions, caused in part by the geographic distance, that has to be overcome by teachers, learners and educational organizations if effective, deliberate, planned learning is to occur.

The concept of Transaction was derived from Dewey (Dewey and Bentley, 1949). As explained by Boyd and Apps (1980) it "connotes the interplay among the environment, the individuals and the patterns of behaviors in a situation" (p. 5). The transaction that we call distance education occurs between individuals who are teachers and learners, in an environment that has the special characteristic of separation of one from another, and a consequent set of special teaching and learning behaviors. It is the physical separation that leads to a psychological and communications gap, a space of potential misunderstanding between the inputs of instructor and those of the learner, and this is the transactional distance. Little is known about transactional distance and much research is needed to understand it better. What follows are conjectures that have at least stood the test of over twenty years' discussion among distance education scholars in several countries, and that might be further elaborated and more formally tested.

It now appears that transactional distance is a continuous rather than a discrete variable, a relative rather than an absolute term. In any educational program there is some transactional distance, even where learners and teachers meet face to face. What is normally referred to as distance education is that subset of educational programs in which the separation of teacher and learner is so significant that it affects their behaviors in major ways, and requires the use of special techniques, and leads to special conceptualization. The relative nature of transactional distance means also that within the subset of educational programs that we call distance education programs there are many different degrees of

that we know about teaching and learning from conventional education is education, we can apply inden of distance education. In practice, however, we discover that transactional distance in many programs is so great that the teaching we deliver cannot be just like conventional teaching. On the contrary, the transactional distance is such that special organizations and teaching procedures are essential.

These special teaching procedures fall into two clusters, and what determines the extent of distance in a program is a function of these two sets of variables. These are not technological or communications variables, but variables in teaching and in the interaction of teaching and learning. The two sets of variables are labelled dialogue and structure.

Dialogue describes the interaction between the teacher and learner when one gives instruction and the other responds. The extent and nature of this dialogue is determined by the educational philosophy of the individual or group responsible for the design of the course, by the personalities of teacher and learner, by the subject matter of the course, and by environmental factors. The most important of these is the medium of communication. For example, an educational program in which communication between teacher and learner is solely by television permits no dialogue; the student might make a response to a teacher, but no consequent response by the teacher is possible. A program by correspondence is more dialogic, yet not to the same extent as one taught by computer conference because of the pace of interaction. Even in programs that have been described as having no dialogue, such as when the learner is working with print, audio, or video-recorded media there is a form of highly structured learner-instructor dialogue. In such situations the learner's dialogue is with the person who in some distant place and time organized a set of ideas or information for transmission to, and interaction with, an unknown distant reader, viewer, or listener. At the other extreme, the interactive electronic media permit dialogue that is more dynamic than that between expert and learner using a recorded medium, and such programs are therefore less distant.

The second set of variables that determine transactional distance are elements in the course design; they are the ways in which the teaching program is structured so that it can be delivered through the various communications media. Programs are structured in different ways to take into account the need to produce, copy, deliver, and control these mediated messages. Structure expresses the rigidity or flexibility of the program's educational objectives, teaching strategies, and evaluation methods. It describes the extent to which an education program can accommodate or be responsive to each learner's individual needs. A recorded television program for example is highly structured, with virtually every activity of the instructor and every minute of time provided for, and every piece of content predetermined. There is little or no opportunity for deviation or variation according to the needs of a particular individual. This can be compared with many teleconference courses, which permit a wide range of alternative responses by the instructor to students' questions and written submissions. Putting together the dimension of dialogue and structure, it can be seen that a typical television program is highly structured and teacher-learner dialogue is nonexistent, so that transactional distance is high. In the correspondence program there is more dialogue and less structure. At the other extreme, the extent of transactional distance is likely to be relatively low in those teleconference programs that have much dialogue and little predetermined structure.

The above discussion should make it clear that the extent of dialogue and the flexibility of structure varies from program to program, rather than from one medium to another. In programs with little

4 of 8

5 of 8

transactional distance, the learner receives directions and guidance through both the structure of the course and dialogue with an instructor. In more distant programs, learners have to make their own decisions about study strategies. Even where a course is structured to give directions and guidance, if there is no dialogue, students may decide for themselves whether the instructions will be used and, if so, when, where, in what ways, and to what extent. Thus, there is a relationship between transactional distance and learning style, since the greater the transactional distance, the more autonomy the learner has to exercise. Thus it can be argued that while transactional distance is a characteristic of every educational program, and that programs differ in transactional distance according to the extent of dialogue and structure within them, there is also variability in the transactional distance between teachers and learners within each educational program, resulting from the interaction of dialogue, structure, and the characteristics of each learner.

What determines the success of distance teaching is the extent to which the institution and the individual instructor are able to provide the appropriate opportunity for, and quality of, dialogue between teacher and learner, as well as appropriately structured learning materials. Frequently this will mean taking measures to reduce transactional distance by increasing the dialogue through use of teleconference, and developing well structured printed support materials. Unfortunately what is appropriate varies according to content, level of instruction, and learner characteristics, especially the optimum autonomy the learner can exercise. Much time and effort therefore has to be devoted to understanding the needs of learner populations, and individual learners, to analyzing the content to be taught, to determining the exact learning objectives, the type and frequency of learner exercises and activities and evaluation procedures, and the relationship between the learner and instructors. In other words, much care should be given to determine both the structure of the program and the nature of the dialogue that is sufficient and appropriate for each set of particular learners and, ideally, each individual learner. There are no quick or ready-made answers to the question of how much dialogue or structure is needed and desirable for effective learning. Nevertheless, addressing this question is likely to provide a better basis for making decisions about when and how to use media and other resources than any other strategy available at the present time.

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# LIST OF ARTICLES IN DEOSNEWS VOLUME 1

\_\_\_\_\_

#1 The American Center for Study of Distance Education Michael G. Moore

#2 GO MEEC! A Goal Oriented Method for Establishment of an Electronic College Morten Flate Paulsen

#3 Audio-Conferencing in Graduate Education: A Case Study Elizabeth J. Burge and Joan L. Howard

#4 Abstracts from the American Journal of Distance Education 1987

#5 The ICDL Database for Distance Education Morten Flate Paulsen

#6 Bibliography on Computer Mediated Communication in Distance Education Morten Flate Paulsen

#7 Computer-Assisted Language Learning at a Distance: An International Survey Dominique Abrioux

#8 Abstracts from the American Journal of Distance Education 1988

#9 China's Network of Radio and Television Universities Runfang Wei

#10 Computer-Mediated Communication and Distance Education around the World: An Annotated Bibliography Morten Flate Paulsen

#11 New Accessions List, 1991, No. 2. The Open University, United Kingdom

#12 Abstracts from the American Journal of Distance Education 1989

#13 Interview with Reidar Roll, Secretary General of the International Council for Distance Education Michael G. Moore

#14 Innovative Computer Conferencing Courses Morten Flate Paulsen

#15 Features of Distance Education in Finland

Jouni Immonen and Jorma Rinta-Kanto

#16 Abstracts from the American Journal of Distance Education 1990

#17 DEOS-L, Book reviews, and Retrieval of Backissues

#18 Computer Networks for Teaching and Research Greg Kearsley & William Lynch

#19 Moderating Educational Computer Conferencing Robin Mason

#20 The Electronic University: Computer Conferencing in Mass Education Morten Flate Paulsen

#21 Internet--The Discoveries of a Distance Educator Walter J. Howse

#22 Distance Education and Technology Newsletter, Vol. 2, No. 1.

#23 Executive Summary of the OAS-IOHE-CREAD Project Armando Villarroel

#24 When Academia Goes Online: A Social Experiment with Electronic Conferencing for the Nordic Media Research Community Terje Rasmussen, Joergen Bang, and Knut Lundby

#25 Distance Education Theory Michael G. Moore

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Vol 1.2 DEOSNEWS

Top of Page