DISTANCE LEARNING:
IMPLICATIONS FOR THE CARIBBEAN

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This paper briefly describes distance learning, its implications for development and education and how it has been used and might be used in the Caribbean. The distance learning experiments by the University of the West Indies and the University of the Virgin Islands are briefly presented and teaching and format considerations discussed.

The technology of development and education is changing at a phenomenal rate. Almost two decades ago the Carnige Commission called electronics technology the greatest instructional revolution in five hundred years. Of the latest technological developments, telecommunications and computers have been the most influential. These developments have tremendous potential for solving some of the practical problems of education throughout the world. The potential benefit for the nations of the Caribbean is very great.

New Paradigm for Education and Development

To be limited by our current conceptualizations of education and learning means that we are frozen in the past, unable to meet the needs of this new and challenging world. A transformation in education is possible, even inevitable, as we explore ways of meeting the needs of our rapidly changing world. The failure of education to equip the peoples of the world to successfully address the challenges that face them at this critical
juncture in history threatens our continued existence. Our technology has changed, but our knowledge and willingness to use it properly have not.

We have the ability to bring increased learning opportunities through distance learning to peoples who would otherwise be deprived of an education because of economics, politics or geography. One of the major impediments to this transformation in education is our inability to break out of our current limiting paradigm of education. This paradigm sees education as a school-bound, real-time, face-to-face activity. Education is taking place all the time, everywhere and through interaction with a diversity of environments. We must develop a new paradigm for education and development.

The development of the mind and spirit has been the key ingredient in the advancement of civilization. No society has achieved success without this key ingredient, and any society devoid of it is destined to be left behind in the continual move forward. The degree that a people have education will determine the degree to which that people can advance. Education is a major factor in the well-being of individuals and is indispensable in creating a social order. The governments and educators of the world have a moral and civic responsibility to improve and spread education as much as possible.

Distance learning will by no means meet all these needs nor solve all the educational problems facing us, and we must be careful not to make such exaggerated claims. The chasing of panaceas has be a recurrent theme in educational reform. Someone comes along with the answer to our problems in education, it is tried for a few years and then discarded after
it fails to deliver on its promises. History shows us that such panaceas have come and gone. The result is that educators have become disillusioned and disheartened. There is a possibility that distance learning will be just another in a series of educational fads. The evidence is against this when one looks at the influence distance learning has had outside the school systems. Television and radio are two examples of such influences that have permeated our world. Even though television and radio have not been used extensively in schools, their influence on the education of the masses is undeniable. The formal educational value of telecommunications has been largely unrealized throughout most of the world.

**Distance Learning Technology**

We are still at the very beginning stages of distance education using current telecommunications technology and much more needs to be learned about how it can be best used, but another type of distance learning has been successfully used for several centuries. Through print materials and books we have learned from distant teachers who have taught us under conditions similar in many respects to that of distance educators using telecommunications today. Education using print materials and books can happen inexpensively, without face-to-face interaction, at anytime and in most places. Current technology allows us to do the same thing with electronic media. Actually, the invention of the printing press is probably the only other educational development in this millennium that could be compared in importance to the current revolution in telecommunications.
Various modern distance learning systems employ telecommunication devices to connect learning centers at two or more sites. The mode of communications can be either one way or two way, synchronous or asynchronous, and can employ a variety of audio and/or visual media. These systems of delivering instruction over distance offer hope to school system overburdened with needs and demands.

Distance education can be conveyed either through wire connections such as telephone lines or cables; air waves using radio, microwave or satellite equipment; software; print materials; or through a combination of these and other methods. The present telecommunications technology supports full motion or freeze frame television, text or graphics and audio conferencing systems. These telecommunication systems have been successfully combined with computer technology.

**Caribbean Distance Learning Experiments**

The people who inhabit the Caribbean come from many diverse backgrounds. Because of limited funds, smallness of numbers, distance from available resources, geographical separation, and limited educational opportunities; the educational needs are great. Educational achievement and opportunity in the elementary, secondary and post-secondary schools throughout the Caribbean is in need of improvement. The ability to provide more educational services are exacerbated by the poor financial conditions of the governments and the high cost of providing the needed resources. The distance education programs in the Caribbean have evolved from these needs. Below are two examples of distance education already being used in the Caribbean.
**UWIDITE**

The most developed, longest running and most extensive distance education program in the Caribbean is the University of the West Indies Distance Teaching Experiment (UWIDITE). This is a good case study of how distance learning might be used in the Caribbean (Lalor, 1982; Sankar, 1985) and how it has worked in actual practice (Lalor & Marrett, 1986). This experiment in distance education was started in the late seventies to determine the feasibility of offering educational and communications services to the English-speaking Caribbean through the University of the West Indies (UWI) telecommunication network. This distance learning project has interactive audio and visual telecommunications with satellite connections between the main campus in Jamaica and several extra mural centers of the University of the West Indies. The UWIDITE system uses telephones, teleconferencing equipment, slow-scan television and other support media (VCR, print, etc.). After more than a decade of experimenting with this approach to deliver educational programs in medicine, education, agriculture and a host of other fields, the distance learning project has been favorably received and continues to offer educational services.

**UVI**

The University of the Virgin Islands (UVI) began experimenting with distance education in the mid-eighties. They have been using computers with telecommunications in experiments and programs to bring educational opportunities where they previously did not exist, or where they only existed to a limited degree. UVI set up a distance learning
system utilizing telephone lines to carry both audio and computer transmissions. The audio transmissions originated from microphones at each site and were delivered through audio conferencing speakers. Visual images were created simultaneously by microcomputers at each site and were shown on large and standard-size screen monitors (Clarken, Rosenthal, & Lewit, 1988). This telecommunications system is also used for inter-campus committee and faculty meetings. It continues to be developed and has shown the value of such projects.

**Teaching and Telecommunications**

The challenge in distance teaching is adopting an instructional technique that will enable remote learners to achieve the educational objectives. An experiment was designed at UVI to compare the attitudes and achievement of students taught at the home site with students at the remote site, but the inability to control all of the extraneous variables related to the students performance on the assessments rendered the experimental data of limited empirical value. The student assessment scores and qualitative judgements of those involved with the experiment indicated very little difference between remote site and home site learning (Clarken, Rosenthal, & Lewit, 1988).

Good pedagogical practices are the similar for both conventional instruction and distant learning, but the need for good instruction is more important in distance learning. This topic has been explored in some depth in *Pedagogical Considerations for the Eastern Caribbean Center Telecommunications Project* (Clarken, Lewit, & Rosenthal, 1987).
number of suggestions for distance teaching based on these and other experiences with distance learning are listed below.

1. Instructional design should include the identification of interactive activities which would support achievement of course objectives, selection of appropriate media for each activity and development of appropriate materials and techniques for these courses.

2. Preparation of instruction is much more time consuming that traditional instruction and it is also more critical. Lack of organization or support materials and gaps in the instructional flow are glaringly apparent.

3. The instructor must compensate for the lack of visual cues by using other aids, such as audio pointing, visual of various sorts and frequent monitoring.

4. Instructors must force interaction with students because the physical absence of the instructor creates a context in which students feel less necessity for involvement and participation, and transfer of attitudes from entertainment media produce an expectation of a passive experience. An effective way to do this is to direct questions to specific students, as general questions do not tend to elicit much response.

5. With the loss of visual feedback from students' expressions and body language the instructor will have little awareness of student response to the instruction. Interaction with the students
is important and this is accomplished primarily through oral questioning. A remote-site facilitator can help to monitor the class and alert the instructor to problems at the remote site.

6. The use of technology and an unfamiliar situation creates tension in some students. A relaxed approach is particularly important in the beginning to set the right tone for the class. Some time should be devoted initially to allowing students to use and become comfortable with equipment.

7. Although authentic visual images of the people interacting appears to have little influence on learning performance, it does have an impact on the effective disposition of the students and instructors. An early visit by the instructor to a distant class is recommended. Such contact could be supplemented by displaying a picture or video image of the instructor for the class and students’ pictures for the instructor.

8. Student and instructor expectations may initially be based on conventional experiences. Remember that expressed student preferences for a live instruction does not necessarily correlate with learning performance.

9. Technology presents opportunities for innovative teaching strategies, such as providing visual elements in remote instruction.

The instructor should be aware of the limitation of distance learning and make adjustments to compensate for these limitations.

**Distance Learning Formats**
The existing telecommunications networks in the Caribbean can be used to deliver instruction in a variety of formats. Rumble suggests that some current models of distance education may not be appropriate and discusses various models of distance education being utilized in Latin America, such as the consortium approach, privatization of distance learning by universities and distance teaching within conventional universities (1985). Some of the following models might be considered in developing distance education programs.

1. A formal course or program might originate from a particular educational institution and be accredited by that institution or may be co-sponsored by all participating institutions with the accreditation possibilities being varied and flexible. Less formal cooperative efforts might be instituted to provide tutoring or workshops in basic skills or particular technical areas.

2. The network might be the sole medium of instruction, or might be part of wider programs involving site visits, broadcasts, correspondence or other activities.

3. Reference materials might be transmitted over the network, mailed as documents or microfilm, or be made available through video disk technology. On-line access to library resources and new techniques in low-cost mass storage media may provide better support to students in both home and remote sites.

4. The use of electronic mail might be expanded to improve communication between instructors and remote-site students. It
might also be used to facilitate communications between students at all of the sites through such things as bulletin boards where questions, answers and comments could be displayed. This type of format may be used as a major component of a class, rather than as a supplement.

5. Facsimile transmission may be used for transmission of materials and responses.

6. The on-site use of computers for modeling, simulation or statistical analysis provides the student with additional resources. Student interaction with the above information resources forms a dialogue characterized by flexibility and student control over time, pace, and the direction of inquiry.

7. Increased use of broadcast television, radio, cable television, satellites, video cassettes, video disks, computers and related technologies should be explored as feasible options for offering educational opportunity.

We need to remove the barriers that prevent us from viewing education in broader contexts so that education can be seen as an activity that takes place in many different contexts under many different conditions. Education can often be transported more efficiently than than students and instructors. Planning, producing and applying current technologies can overcome some of these problems.

Explore the formats provided through such things as computer assisted instruction and and other instructional technology used outside of formal
Distance Learning

Education. Effort must be made in specification, planning and design to insure that optimal delivery mediums are selected for each area of instruction, and that adequate supporting resources are made available.

Instructional goals and techniques should drive the selection of technology. This is not always possible and often the choice is to do the best you can with what you have. One point to keep in mind is that success in the application of technology is in direct proportion to its transparency. This means that the media and technology should allow students and instructors to focus on the subject material with as little distraction as possible.

Whatever format is used, it is recommended that equipment should be permanently installed with concealed wiring. Constant setting up and taking down is hard on the hardware and the support staff, is time consuming and can result in system failure because of faulty connections. Backup equipment should be available, and the procedures to be followed in case of system failures should be clearly understood. The system should be set up far enough in advance so that any complications can be corrected before the actual transmission.

Conclusion

With careful planning, the benefits of distance learning in the Caribbean can be great. The future possibilities look very promising. Students who had previously been denied an education because of limitations that can be overcome with distance education may now have an opportunity to learn.
The problems of financing, teacher shortages, limited classrooms, remote populations and increased educational needs can be somewhat alleviated through distance learning. The resources for learning can telecommunicated to the students rather than students and teachers being brought together in the same place at the same time.

Clearly education is an important part of individual and national development and clearly education is in need of improvement to meet the growings needs of today. Distance learning is one tool that can be used in furthering this important goal. The diversity of delivery and format can allow for a diversity of approaches and can introduce techniques and media that were previously missing in instruction. This could facilitate learning and better utilize our human and technological resources. It is time we start using this tool to aid the education of the masses and the betterment of the world.

The experiments that have been conducted through the University of the West Indies and the University of the Virgin Islands show that the potential of distance education can be translated into reality. We should not be limited by these conceptualizations of distance education though, but should be creative in our approaches of applying this new technology to solving educational problems. The way we teach and the way we learn will have to be re-examined in light of the differences inherit in distance education and the various formats should be considered when attempting to find the best approach. Distance education can enhance learning if used appropriately.
References


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