The tremendous growth and advancements in telecommunications technologies in the 90’s has opened the door to many new approaches for distance learning and education. The challenge is in determining the most appropriate mix of media to utilize in the delivery of courses and programs at a distance. National University, in collaboration with instructional designers experienced in video teleconferencing and Web design, has developed an innovative new Global MBA degree which incorporates CD-Rom, World Wide Web, e-mail, and video teleconferencing. Beginning September 1996 the Global MBA will be delivered to students world wide, who are attending universities that have cooperative agreements with National University.
Overview of Global MBA Project:

National University, in the fall of 1995, embarked on an ambitious project to develop an innovative Global MBA program which would be available to students throughout the world and would use the latest in digital technologies. The focus of the program facilitates discussion between corporate cultures around the world as course projects are completed by groups of geographically dispersed students. Through the program students not only learn the tools of business but learn how current and developing technologies are an integral part of today’s global economy.

The Global MBA program is made up of three distinct modules. Module one, a series of three background skill courses is required prior to completing the other modules. Courses include Managerial Accounting, Applied Business Statistics, and an Applied Technology course, the latter course being specifically designed to provide students with the technology skills required in module two. The first module of the program is completed by students at host institutions, such as Girne American University in Turkey, or The Portuguese Catholic University of Portugal in Lisbon, with which National University has cooperative agreements. Students may also complete these courses through other accredited institutions with which National University has articulation agreements.

Module Two of the program, the innovative heart of the project, consists of a series of six multimedia courses delivered at a distance. These courses are delivered through a mix of technologies which allow students to progress at their own pace and engage in synchronous and asynchronous communication with the instructors, peers, and the administrative offices which support distant students. Each of the six courses is built around an interactive CD-Rom and print package which guides the students through the readings, how to approach and analyze each case study, and information resources available for completing assigned work. Each CD-Rom is closely integrated with a Web site and it is on the Web where students can review video clips, previously shown on the CD, of subject matter experts; review the actual cases; and use the vast resources of the Internet to conduct research required for completing case studies. Students in these courses are also invited to participate in on-line chat sessions facilitated through conferencing software and use the e-mail capabilities to interact one-on-one with other students and the instructor of record. Video teleconferencing is used to provide students access to live real-time discussions with experts in the field.

The six courses which comprise Module Two are:

- Seminar in Executive Topics
- Human Resource Management
- Bargaining and Negotiation
- Strategic Management of Financial Institutions and International Markets
- Contemporary Issues in Global Marketing Strategy
- Global Economic Strategy
Module Three, the collaborative research portion of the program, requires each student to complete a series of three research courses and present their findings at the National University Global Institute in the spring or fall. Students in these research courses are encouraged to form diverse groups of 3 - 5 to work on a research project and may start the first research course upon completing course 3 of Module Two. Each research course is completed at a distance under the guidance of a faculty mentor/advisor and interaction is facilitated through conferencing software and e-mail. The required courses for Module Three are:

- International Study Project
- General Field Study
- Entrepreneur Field Study

**Conceptual Model:**

As National University set out to develop the Global MBA, the conceptual design presented the instructional designers and the University with a series of questions which needed to be addressed. Issues ranged from intended audience, to appropriate media, to delivery and telecommunication concerns. Developing a program for a potentially large, diverse audience is somewhat unique and the ability to conduct an analysis of the learners is limited by this feature. Therefore, the elements considered in the design try to address all learning modalities and possible constraints. Questions concerning language proficiency, cultural sensitivity, and technology access are crucial.

From the outset, National University wanted to produce a program that was unique in its use of digital technologies and its approach to collaborative learning through tools of the Internet. Agreements formed with international host universities helped in assuring that the technological resources would be available to most students. It also assured, in many cases, that assistance would be available to students who required prerequisite course work in Computer Literacy, Accounting, Economics, and English. English proficiency was a subject of many design meetings as the designers struggled with how to best present the material to students whose first language is not English. Through the University’s experience with its international students attending regular courses in the United States, it had been observed that international students understand the written word far better than they comprehend verbal communication. Thus, it was decided early in the design phase that the majority of the video and audio clips used in the course would be accompanied by a written transcript.

Access to not only the technology but the program in general was also a major design issue. A cornerstone of distance education has been the independence of time and place for learners, and National University wanted the distance education portion to provide learners flexibility in completing the courses requirements. However, distance education programs have traditionally suffered from low levels of interaction, low motivation, and high dropout rates. To address these issues the designers drew upon the literature base of the field.
Interaction:

Michael Moore’s (1989) article on interaction refers to three levels of needed interaction in distance education environments: Learner - Learner interaction where the students have an avenue through which collaborative discussions can take place to review concepts and share ideas; Learner - Instructor interaction where a means exists whereby the instructor and the students can have meaningful dialog and elaboration, feedback, and guidance can be provided in a timely manner; and Learner - Content interaction where, if appropriate, students can interact with content which is presented in a way which facilitates branching to related ideas and issues via hypertext. Programs which provide for these levels of interaction help assure that students have access to similar interactions that one would normally experience in the traditional classroom.

Motivation:

As with any independent study format, distance education is plagued by low levels of motivation. The design of such programs must, therefore, integrate components which will engage the learner in the content and help assure that the learner stays on task in order to meet due dates for assignments and exams. Obviously, one way of accomplishing this is strict timeframes for the completion of various components of the course. However, it is desired that the design of each course address learners internal motivation factors. For adult learners, motivation is a combination of relevance and confidence (Rossett, 1987) where they not only must see the application of what they are learning to their daily lives, but must be given the perception that they possess the ability to succeed at the task. Keller’s (1987) work on motivation through his ARCS model is also very important to the design of independent instruction. Getting the students attention and the students walking away with a high level of satisfaction are crucial to providing motivation to finish the course. The design of role plays, gaming, and content simulation can all be used to engage the student in the learning process.

Drop-Out:

High dropout rates are, unfortunately, the norm for independent study programs. To help overcome this the program design needs to assure that there is an appropriate support structure for the learners. Students must have a point of contact in the way of an administrative office where staff will assure that students’ issues and concerns about the program are addressed in an efficient, timely manner. The handling of all correspondence, mailings, approval of proctors, and assisting with technical issues are the responsibility of the administrative support unit. This unit should also monitor each students progress and provide reminders of assignment due dates and conduct follow-up calls to students who are falling behind in their course work. Through the services provided by this unit the dropout rate can be reduced.

The implications of these issues were taken into account during the design of the Global MBA, and especially when looking at the appropriate mix of technologies to use in the delivery of the program.
Module II Course Design:

While it is true and supported in the literature that no one medium produces higher learning outcomes than another, certain attributes of media can help facilitate a richer learning environment. It is also the consensus that the appropriate mix of media will enhance the learning process more than any single medium. National University’s desire to use digital technologies in a unique combination for the Global MBA and the limitations of current on-line technologies prompted the instructional designers to look at which technologies could be used interactively and which should be used in a support function. Added to this was the unknown of what level of technology would be available in various countries.

The Internet and the Web were an obvious starting point for the designers. However, even with the introduction of Java and Shockwave the World Wide Web is still not an adequate platform for robust interaction. At best it is reminiscent of the early page tuners of CAI with simple hyperlinks. The power of the Web remains in its search capabilities for research and its accessibility to a vast array of information. The issue of bandwidth is also a major deterrent to using the Web for high-end graphics, audio, and video clips. The focus of the design, therefore, shifted back to multimedia on computers and how to best bring the content to life.

Figure 1
The Global MBA was being designed around the case study format which lent itself to a rich mix of print, video role playing, branching to support files, and the use of an office metaphor. The designers wanted to immerse the learners in an atmosphere which would emulate doing business in the international arena. Thus, it was decided to build the CD-Rom around the metaphor of a high tech office (see figure 1) where the learners would have access to video help, role plays (both animated and real), print materials, library references, and a conference room which would take them to the on-line chats. The metaphor of the office was seen as a means to incorporate a game like atmosphere and a simulated environment to address the motivation factor.

In support of the information on the CD, a Web site exists for each course that is used by the students to conduct actual research on case studies that must be submitted to the instructor of record. Here students find hyperlinks to various corporate sites where marketing, financial, and personnel information can be obtained. They also have access to the case studies and video help which they previously viewed on the CD. In this way they can conduct their research on the case study without the need to constantly return to the CD. (see figure 2).

![Figure 2](image-url)
Although the students are expected to interact frequently with the instructor and their peers as they develop their case study reports, it was felt that this dialog could be supplemented with the addition of monthly video teleconferences between the students at various locations and the instructor. National University’s 24 port bridge will be used to support this component and the staff will publish on the Web site the times, dates, and suggested locations where the students can participate in the video teleconferences. It is also recognized that not all students will be able to attend these sessions so all video conferences will be taped and available by mail to the students.

To support the mix of technologies it was recognized that a key to the success of most distance education programs is the print package. The print package must not only guide the student through the administrative features of the course such as how to submit assignments, due dates of assignments and exams, and withdraw and drop dates, but must also include a majority of the text which is presented on the CD-Rom or on the Web. Students need to be comfortable with the mix of media and should be able to access reference sources easily at any time especially if they are away from their computers. The print packages for the Global MBA courses, therefore, contain reprints of the case studies, most references sited on the CD-Rom as recommended readings, course outline, administrative information, and information on how to contact the staff which support the distance education students.

**Copyrights and Other Concerns:**

One of the most challenging areas in the design and development of a project of this kind is the copyright laws. We are just now starting to see the emergence of literature from authoritative committees which provide some guidelines for material distributed electronically for education. It appears that in many ways the fair use guidelines, which have been set for the print medium, will still hold for electronic distribution. However, many authors and publishers are very wary of having their materials digitized and made available in this form, as they feel they lose control of where and how it may appear. This is especially worrisome for information published on the Web. To protect National University and the instructional designers every effort was made to procure the rights to use the case studies and textbook materials in a digital format. In cases where permission could not be obtained, the material was dropped and the Subject Matter Experts, who were contracted to work on the courses, were tasked with supplying the missing pieces.

To further insure against copyright violations the design elements which appear on the CD-Rom and the Web are original artwork, video clips, audio clips, and music. Professional talent was contracted for this work with all rights being owned by National University. This element is obviously a major cost factor in the design of a project like the Global MBA. Therefore, it was crucial that the office metaphor be easily modified for each course and that the design structure could be replicated for all six courses at a minimal additional cost.

The technology required to participate in this program is robust and not without its inherent quirks. The challenge to National University and the administrative office, which
supports distance education students, is to provide cost effective avenues through which participation in this program is possible. The computer technology requirements are 16 Megs of Ram and 100 MHz machines with CDs, a configuration which is at the low end of current entry computers in North America, but not necessarily the rest of the world. Partnerships with host institutions are, therefore, critical to providing these computer resources and the video teleconferencing networks, technologies which may not be readily available to individuals in other countries. However, the University must also explore ways by which individual students not near host international universities may also participate in the program.

The Future:

Distance Education is not a new area, nor are the technologies used in the Global MBA for delivering education at a distance. However, through the integration of a mix of digital technologies National University hopes to provide a richer learning environment where the instructor of record can facilitate an in depth look at doing business globally. This mix of technologies provides a beginning look into how people around the world will interact to solve business issues, and to use the technologies for more effective and efficient delivery of information. Students in the Global MBA program will be some of the first to explore these technologies in simulating cooperative ventures between individuals who are geographically dispersed. Issues which used to be related to the separation of time and place will become more transparent and the students should emerge better prepared to conduct business in the global community.

References:


