A Problem-Based, Collaborative Learning Approach to Distance Education at the MBA Level: e.MBA@PACE

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Abstract
This paper addresses some of the issues associated with developing distance education at the MBA level. Several approaches are considered. The Internet-based asynchronous MBA program developed at the Lubin school of Business of Pace University is described in detail. This program, called e.MBA@PACE, uses a problem-based, collaborative learning approach to distance education in its curriculum design. The program is team-taught and students proceed through the 24-month program as a cohort. The program uses eight projects that are solved by virtual teams of students and one project that is accomplished by individual students. Teams vary throughout the program. There are nine residencies in the program including an eight-day, orientation residency in which an initial project is solved and eight weekend residencies that follow each of the remaining projects. During the residencies, students present their project solutions to industry experts and the faculty; students are assessed on their understanding of the MBA learning objectives associated with each project. They are also introduced to the business project that is to be solved and presented at the next residency and taught managerial skills through a variety of workshops. The distance-based learning environment for the program is supported by Blackboard’s Courseinfo courseware.

Introduction
The market for Internet-based asynchronous MBA programs is expanding rapidly. Barriers to entry that once existed in the educational marketplace are breaking down as the technology for Internet-based programs decreases in cost and allows schools and universities to introduce MBA programs outside their regional markets. This new approach to program delivery is exciting to many regionally-based schools of business because it allows the possibility of expansion into markets that would not ordinarily be available to them. A school using asynchronous techniques can now enter a new marketplace without large capital expenditures, such as those required to build facilities or to acquire a regional faculty and staff. At the same time, the ease of entry afforded by this approach can also be a threat to regional schools and possibly to nationally known schools as well.

In this paper, we begin by describing the distance education environment facing business schools and several distance-based MBA programs that are “up and running.” These programs differ enough to suggest possible alternative strategies for entry into this market. We then go on to describe our experience in developing an Internet-Based MBA program at Pace University. Our program is non-traditional in the sense that it focuses on problem-based, collaborative learning and the development of managerial skills rather than achievement in discipline-based courses. We hope our experience and approach will stimulate more discussion on how to re-engineer existing MBA programs in light of the Internet’s impact on education and the competitive marketplace.

Distance Education and Business Schools
Michael Hitt predicted in a recent edition of the Academy of Management Review (Hitt, 1998) that there will be an increasing emphasis on distance education as a result of the new asynchronous technology and its ability to provide a global delivery system. The National Center for Educational Statistics reports that 44 percent of two- and four-year higher education institutions offered a total of 52,230 distance education courses in 1997-98 compared with 33 percent of institutions offering a total of 25,730 such courses in 1994-95 (Mathie, 2000). It appears that distance education in one form or another is beginning to make significant inroads into the educational process and the thinking of professionals in the field.

Yet, few schools of business have taken a very entrepreneurial stance in this area. For example, none appears to have goals of dominating business education globally through the use of distance learning (Hamilton, 1997). Of course, this may change as the marketplace responds to distance education and business schools begin to deal with the decline in funding, particularly in the public sector. Faced with less funding, some action-oriented business schools are
already beginning to seek lower cost delivery systems for providing high quality education to a broader student market (Porter, 1997). These schools often ask the question: “How can we do it more cheaply, but with quality, and reach more students?” Distance education may be one mechanism for achieving this goal and answering this question.

As schools of business begin to use distance learning to expand their markets, they will pose a threat to schools that employ only traditional educational delivery systems. Threatened schools may respond to inroads made by more aggressive schools by offering more courses via the Internet, especially as the cost of the distance education infrastructure decreases. Unfortunately, offering courses via the Internet as a response to a competitor may not be sufficient. It is likely that a more cohesive plan involving changes in faculty allocation, faculty reward systems, student selection procedures, and curriculum will be necessary for long-lasting success. Still, there is a silver lining to the cloud of distance learning in the competitive marketplace. Few schools of business have, as yet, put together cohesive plans for delivering quality products via distance education. Opportunities exist for schools capable of presenting a quality product quickly to this market. Thus, asynchronous distance learning programs can be a source of threats and opportunities.

**Some Alternative Approaches for MBA Programs**

MBA programs are often one of the distance education products offered by business schools. While program details can vary, several strategic approaches are emerging. These strategies generally reflect the Porter model of cost leadership, differentiation (mainly via brand image), and focus (Porter, 1980; Varanelli and Baugher, 1999). Beyond these broad strategic categorizations, there are also some significant differences in how distance-based MBA programs are delivered and taught— including differences in residency periods, the degree to which programs are discipline-based versus problem-based, and the degree to which specific courses are offered via the Internet as a part of the program.

To provide a broad sense of competitor reactions to the challenge of distance education in this marketplace, four asynchronous MBA programs are considered in this section: Duke University, Ohio University, Fordham University, and Bienville College. Table 1 summarizes the key components of these programs. Each program serves as a case study on how an MBA might be developed using this new technology.

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**Duke University**

Duke University’s MBA for Global Executives demonstrates opportunities for creative implementation of distance learning programs in this rapidly developing industry. Duke is interesting because it is a Tier 1 business school attempting to enhance its reputation and expand its global reach by offering an expensive, highly selective and rigorous distance learning program. The 19-month cohort program relies on individual study and group projects to complete complex, discipline-based assignments geared to 15 “courses” in such disciplines as management, economics, finance, and marketing. There are five residencies in four different parts of the world: North America, Europe, Asia, and South America. The residencies last about two weeks and include a minimum of six daily hours of classroom time. The distance learning portion of each term lasts about 10 weeks and includes virtual teams dispersed around the world that work together to solve assignments related to course material covered during the residencies. Students are members of two different teams during the program. The teams are supervised by the faculty via the Internet. There is no major.

Students are expected to have a minimum of 10 years’ professional experience. However, student selection at Duke lies less with traditional admission criteria and more on the willingness of corporate sponsors to invest $95,000 in tuition. All students are expected to secure company sponsorship before they apply. Except for travel to and from the residencies, this tuition covers all costs including the residencies and a personal computer. The program admitted 85 students for the cycle that began in 2000. While about half of the students enrolled in the Duke program live and work within the United States, the program was designed to significantly enlarge Duke’s geographic scope while enhancing its global reputation and improving its relationships with world-wide corporations. In general, it appears that Duke’s overall strategy is that of differentiation with a broad global focus. It is seeking a high quality student from any location in the world. Duke University’s business school is AACSB accredited.

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**Ohio University**

Ohio University offers an Internet-based MBA that is built around an educational model, that uses problem-based learning as a vehicle for presenting the business concepts. In its use of projects, Ohio University avoids specific, discipline-based projects and does not
offer majors. Rather, the same project is often used to educate students about a broad range of disciplines at the same time. In concept, Ohio University’s program is similar to most Executive MBAs, which are broad-based programs of study emphasizing business concepts for working individuals. The basic program is structured around nine major learning projects. Two years are required to complete the program and students progress through the program as a cohort. In addition to the nine learning projects, there are three one-week residencies: one at the beginning, one in the middle, and one at the end of the program, as well as three extended weekend residencies during each of the two years. All residencies take place at Ohio University.

Ohio University’s student audience for this program is similar to students who might choose an Executive MBA program but who would like to minimize their on-site activities. The program requires prospective students to have from two to four years of increasing responsibility in a management position. Sponsorship by the student’s employer is expected. This logic is similar to that of Executive MBA programs where the goal is to develop skills that students can use immediately in their current jobs. While students can enroll from around the world, the market is much less global in nature than that of Duke. All residencies take place in Athens, Ohio. Ohio University is using a focused differentiation strategy in that they are emphasizing their brand image as an AACSB accredited business school and pursuing a relatively narrow market segment (i.e., Managers Seeking an Executive MBA). The tuition is $35,000. Except for travel to and from the residencies, this tuition covers all costs including the cost of the residences and a laptop computer.

**Fordham University**

Fordham University offers a Transnational MBA through the Internet. In this program, Fordham uses residencies and Internet-based education in a traditional Executive MBA format but with a transnational emphasis. The program is discipline-based, but no major is offered. It takes place over 27 months and has 27 monthly residency periods in which classes convene in an executive conference center north of Manhattan from Friday to Sunday. Learning between residency periods is accomplished over the Internet. The program involves a prescribed course of study that includes 22 courses. Some courses are offered over the Internet, but for the most part, the program relies on individual study and group projects, which are supervised and completed over the Internet and during the residency periods. Monthly residencies can involve on-site “residencies" at a domestic or overseas location of particular business interest. Students travel through the program as a cohort.

The audience for Fordham’s Transnational MBA is similar to a standard Executive MBA program. The program is designed to capture a student audience that is not likely to enroll in their regular MBA program due to time constraints. While students may enroll from abroad, the focus is clearly on students from the United States — unlike the Duke program, which has a much heavier emphasis on worldwide enrollment. Given their solid reputation and emphasis on U.S. managers and executives with an interest in moving to global assignments, Fordham is using a focused differentiation strategy. The tuition is $80,000 plus the cost of travel to and from the residencies, which may involve worldwide travel. Fordham University’s business school is AACSB accredited.

**Bienville College**

Bienville College is a distance learning institution located in Louisiana. The school offers a distance learning-based MBA which has no majors and uses a standard 42-credit, discipline-based set of MBA courses that is expected to take 14 months to complete. There are no residency periods. All course work is completed under a mentor’s supervision through Internet technology. No virtual teams are used. The Louisiana State Board of Education and Board of Regents license Bienville College.

Bienville’s MBA program is open to any student with an undergraduate degree from an accredited institution who has a minimum of three years’ business experience. The degree need not be in business. The total cost of the program is $5,450. Bienville College is pursuing a cost leadership strategy in that it is seeking a large number of students and it is in no way emphasizing the uniqueness of its product. Its pricing reflects this strategy, as do its marketing efforts and advertising, which are geared almost completely to Internet users. Its offer of a program without a residency requirement also allows the potential for higher numbers of students in the worldwide market afforded by the Internet. Bienville College is not AACSB accredited.
Table 1

Summary of Components for Four Internet-Based MBA Programs

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>Duke University</th>
<th>Ohio University</th>
<th>Fordham University</th>
<th>Missouri State University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Differentiation</td>
<td>Focus Differentiation</td>
<td>Focus Differentiation</td>
<td>Cost Leadership</td>
</tr>
<tr>
<td>Cost</td>
<td>$95,000</td>
<td>$55,000</td>
<td>$80,000</td>
<td>$5,450</td>
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<tr>
<td>Residence Travel</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Target Audience</td>
<td>Executive MBA</td>
<td>Executive MBA</td>
<td>Executive MBA</td>
<td>MBA Students with UG</td>
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<tr>
<td></td>
<td>High Quality</td>
<td>High Quality</td>
<td>High Quality</td>
<td>Degree and 3</td>
</tr>
<tr>
<td></td>
<td>U.S. Managers</td>
<td>U.S. Managers</td>
<td>U.S. Managers</td>
<td>Years Job Experience</td>
</tr>
<tr>
<td></td>
<td>Seeking Global</td>
<td>Seeking Global</td>
<td>Seeking Global</td>
<td>Worldwide</td>
</tr>
<tr>
<td></td>
<td>Assignments</td>
<td>Assignments</td>
<td>Assignments</td>
<td>Student Body</td>
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<tr>
<td>Curriculum Emphasis</td>
<td>Global</td>
<td>Traditional</td>
<td>Transnational</td>
<td>Traditional</td>
</tr>
<tr>
<td>AACSB Accredited</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Discipline-Based</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Majors Possible</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
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<td>Learning Approach</td>
<td>Regular Courses</td>
<td>No Courses</td>
<td>Regular Courses</td>
<td>Internet Courses Only</td>
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<td></td>
<td>Internet Projects</td>
<td>Internet Projects</td>
<td>Internet Projects</td>
<td>Only</td>
</tr>
<tr>
<td></td>
<td>Virtual Teams</td>
<td>Virtual Teams</td>
<td>Virtual Teams</td>
<td>Only</td>
</tr>
<tr>
<td>Residence Periods</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Five Throughout</td>
<td>Three One-Week</td>
<td>27 Weekends</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>World</td>
<td>&amp; Six Weekends</td>
<td>Some International</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All in U.S.</td>
<td>All in U.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timeframe and</td>
<td>19-Month Cohort</td>
<td>24-Month Cohort</td>
<td>27-Month Cohort</td>
<td>14-Month Non-Cohort</td>
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<tr>
<td>Student Body</td>
<td></td>
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</tr>
</tbody>
</table>

Pace’s Distance-Based MBA Program: e.MBA@PACE

Pace University’s Lubin School of Business entered the distance education market in May 2000. The school’s distance-based MBA program is e.MBA@PACE (Pace University, 1999). It combines the convenience of online Internet learning with face-to-face residency weekends every 10-12 weeks. It leads to an MBA in Management in Pace’s AACSB-accredited business program (AACSB, 1991) and is priced at $50,000. This price includes the cost of the residencies in New York City, but not the cost of travel to and from the residencies. Students advance through the 24-month program as a learning cohort.

Figure 1 shows the on-line program overview page where potential students can access important program information. The program is different in some significant ways from the four programs discussed earlier while similar in other ways. Of the four programs described, Pace’s program most resembles that of Ohio University. Like that program, there are no discipline-based courses (e.g., accounting, marketing), students travel in a cohort and work on projects to achieve learning objectives, and students are comparable to those who might choose an Executive MBA program. Unlike that program, the Pace program emphasizes more collaborative learning, links each residency to a specific project, and assures that a variety of managerial skills are developed (e.g., team building and coaching).
the initial residency, students work in teams to complete a short orientation project, which helps them understand the requirements of the problem-based, collaborative learning process.

Face-to-face classroom interaction also occurs during eight weekend residencies conducted at the completion of each project. During these residencies, solutions to the projects are presented to program faculty and practitioner experts. At this time, students are assessed on how well they have mastered the learning objectives associated with each project. Workshops for developing managerial skills are also included in the residencies. A significant portion of each residency is geared to helping student teams organize and develop work plans for the next project. Since teams change from project to project, much as work teams in the real world change, organizing efforts can be a key ingredient for future success.

**Students and Faculty**

Students in the e.MBA@PACE program have a minimum of five years of business experience. They come from diverse backgrounds and act as a cohort for the full 24-month program. In the current class, students have experience as engineers, bankers, medical doctors, marketing managers, investment bankers and more. They generally have a broad view of business rather than a narrow specialty. The students are geographically diverse—drawn from the New York metropolitan area and other parts of the country.

The program faculty is comprised of senior, full-time business school faculty. Six faculty members comprise the educational team for a single class. The faculty team is committed to the class from program start to finish. The team is drawn from the disciplines of accounting, finance, management science, marketing, organizational behavior and strategy. If there is a need for specialized faculty in an area such as tax and law, a faculty member can be attached to the team on a temporary basis. Faculty members can take on different roles including acting as a project director for a specific project, as a team facilitator, or as a discipline-learning specialist. The assignment of faculty duties is a function of project needs.

All faculty are trained to work in the new distance-based, educational environment. It is expected that faculty will rotate in and out of the program over time with a core group of faculty remaining to educate future faculty. It is also expected that future faculty will make use of the learning projects developed by the initial group of faculty though it is also clear that these projects may evolve over time.

**Emphasis on Problem-Based, Collaborative Learning**

One unique aspect of the Pace program is its emphasis on problem-based, collaborative learning. All aspects of the program, including the residencies, are geared to this approach. This contrasts to the traditional MBA curricula, which is generally comprised of a series of courses in various business disciplines: accounting, economics, finance, law, management, marketing and tax. In this problem-based curriculum, students work in teams with a faculty advisor toward the solution of realistic, large-scale business problems that cross disciplinary lines. While this approach may be different, it has distinguished precedents in educational theory; effective counterparts in other professional fields, especially medicine; and at least face validity in its evocation of the experience of professional practice in business.

Problem-based learning exemplifies a constructivist approach to curriculum as championed by John Dewey and Edward M. Thorndike in the early 20th century. Constructivism was a reaction to the objectivist approach that was then, and still is, the philosophical basis of most instructional design in the United States. Objectivism leads instructional designers to prescribe plans (theory and other content) that learners may, at some future point, apply to real situations. In contrast, constructivism suggests that instruction should focus less on planning for the future and more on developing the learner’s ability to construct (and reconstruct) plans and actions in response to the demands of a given situation (Duffy and Jonassen, 1991, p. 9.) In the constructivist approach, theory, facts, and other information are generally learned as needed to satisfy the demands of a specific situation. They are not “pre-learned” far in advance of some possible future need.

Problem-based learning and its constructivist approach to education emerged as an educational framework in medical institutions in the 1960s in Canada, the Netherlands, and Australia, as one answer to criticisms of the inapplicability of memorization during the ‘information explosion,’ the fragmentation of the medical curriculum, and the lack of prepared graduates” (Major, 1999, p. 7). In the U.S., “problem-based learning has become popular in the health care professions because of the interest in shaping a new kind of practitioner for the future” (Bruhn, 1997). Following this approach at the Southern Illinois School of Medicine, H.S. Barrows (1985) was able to increase the application and retention of knowledge in the treatment of patients. Schön (1983, 1987) contends
that such an approach is also well suited to the business profession and should result in professionals who become self-directed and continuous learners.

Majors (1999) provides an excellent insight into the process of problem-based learning in his description of the approach used by Samford University in Birmingham, Alabama for restructuring of its undergraduate programs:

Problem-based learning (PBL) is an approach to learning in which problems serve as a stimulus for students to gain course concepts and content as well as metacognitive skills. Generally PBL problems are illstructured, based on real situations, and have more than one ‘right’ answer. In the PBL environment, students confront a problem before they receive all of the information necessary to solve it. Students work in teams to define the nature of the problem, to identify what additional resources they need, and to find viable solutions. Faculty members act as facilitators by asking questions and monitoring group processes as students actively pursue viable solutions. Faculty members also guide students to resources. Students must generally reapply the new knowledge to the original problem and communicate the results of their findings. Among the anticipated outcomes of PBL are enhanced critical thinking and problem-solving skills, research skills, communication skills, and content knowledge. (p. 7)

How effective is problem-based learning for business education as compared with more traditional approaches? Convincing hard data is not yet available. Stinson and Milter (1996) assert that business students find the problem-based approach motivating and that problem-based learning transfers more readily to practice than learning from more objectivist approaches. Albanese and Mitchell (1993), in an extensive review of the literature on the use of problem-based learning in medical education, found that students and faculty judge problem-based learning to be effective. More research is needed on the effectiveness and efficiency of this approach for preparing business professionals. In the Pace program, the faculty team’s experience has shown that this “just-in-time” learning model leads to an immediate application of business concepts and tools to realistic problem solving and an increased possibility for transfer of learning to the work setting.

### Project Descriptions

Each of the nine projects in the e.MBA@PACE program is the equivalent of six credits of work in the regular MBA program and designed to achieve a series of MBA learning objectives that are comparable to those of the regular MBA program. Table 2 describes the projects. Students are assessed on their achievement of each project’s learning objectives during the residency period that immediately follows the project’s completion. However, it should be emphasized that the program involves more than these nine projects. Faculty members also develop learning modules geared to topics in the projects. Managerial skills that are behavioral in nature are also developed during the residency periods.

<table>
<thead>
<tr>
<th>Project</th>
<th>Title</th>
<th>Project Description</th>
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<tbody>
<tr>
<td>MBA 710 Operations Analysis and Information Technology</td>
<td>The team will prepare a proposal to establish a new call center(s) to serve the NAFTA Region for a larger service (like Matsushita or Sony) that repairs or replaces electronic entertainment equipment.</td>
<td></td>
</tr>
<tr>
<td>MBA 712 Competitive Strategy</td>
<td>The team will develop a business strategy and implementation plan to improve the financial and operating performance of a firm within 3 to 5 years. Justification for the strategy will include 5-year industry demand and firm market share projections, pro forma financial statements, and earnings per share forecasts that are expected to result from the business strategy.</td>
<td></td>
</tr>
<tr>
<td>MBA 713 Global Strategy</td>
<td>The team will develop an analysis of and recommendation regarding the impact of a business acquisition, divestiture, or strategic alliance on the performance and operations of a global diversified company such as General Electric, Phillips, or Matsushita. Support for the recommendation will include financial projections, corporate strategy considerations, and organizational impacts. The project should also analyze interrelationships between the proposed acquisition, divestiture, or strategic alliance on the synergy with other business units in the firm’s portfolio.</td>
<td></td>
</tr>
<tr>
<td>MBA 714 Cost Accounting and Supply Chain Management</td>
<td>The team will develop a recommendation for improving a complex manufacturing operation. This recommendation may incorporate make-or-buy decisions, forward or backward integration decisions, continuous or revolutionary change processes, and redefinition of input or output requirements in terms of cost, quality, and service.</td>
<td></td>
</tr>
<tr>
<td>MBA 715 e-Commerce Marketing</td>
<td>The team will develop a business plan for a start-up e-commerce service business. This project incorporates sophisticated marketing and financing techniques useful in the highly uncertain start-up situation. This project will also extend the concepts and techniques from the last project to a service operation. The resulting business plan should be able to attract the necessary venture capital to launch the business.</td>
<td></td>
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<tr>
<td>MBA 716 Financial Analysis</td>
<td>The team will develop a recommendation to a global financial institution for the temporary investment allocation of $100 million (awaiting an acquisition opportunity) into a diversified portfolio of global securities.</td>
<td></td>
</tr>
<tr>
<td>MBA 717 Legislative and Regulatory Issues in Business</td>
<td>The team will develop a plan for creating a more favorable legislative or regulatory climate for itself or its industry. In the process, the team will explore how deregulation of an industry affects the ways competitors do business, the skills they need to compete, and how they manage their operations.</td>
<td></td>
</tr>
<tr>
<td>MBA 718 Competitive Management</td>
<td>The team will develop a recommendation for how a large established firm should cope with stiff competition from smaller start-up firms conducting business using new and different paradigms (situations similar to Borders vs. Amazon.com, Bank of New York vs. Wingspan.com, A.G. Edwards vs. eReader.com).</td>
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</tr>
<tr>
<td>MBA 719 Individual Project</td>
<td>Individual students will design and implement a significant multidisciplinary project within their employer organization. Both the program faculty and the employer organization must approve the individual projects.</td>
<td></td>
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</tbody>
</table>

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**Table 2**

Project Descriptions for the e.MBA@PACE Program
Residencies

The concept of virtual teams for problem solution and residencies for the presentation of project results and learning assessment is designed to provide e.MBA students with maximum flexibility in planning an education that fits their demanding schedules. As noted earlier, the program requires nine residencies over a 24-month period. In total, 32 days of residency are required. The orientation residency at the start of the program is eight days. The remaining residencies occupy eight weekends over the 24-month period. Residency dates are established at the start of the program so that students have a long planning horizon for fitting the residencies to their schedules.

Orientation Residency

The orientation residency has these characteristics:
- Eight days - Saturday to Saturday.
- Students learn the collaborative courseware.
- Student teams solve an orientation project.
- Teams present the project solution to industry experts.
- New teams are formed and they are introduced to the first distance-based project.
- Teams, with faculty guidance, organize to solve the first project.
- Teams present their solution work plan to faculty advisors.
- Faculty conducts debriefing session.

Project Residencies

A residency separates each pair of projects. The characteristics of these residencies are:
- Two and 1/2 days—Friday morning to Sunday afternoon.
- Teams present project reports to industry experts and faculty.
- Individual assessment on project learning objectives.
- New team assignments.
- Introduction of new project.
- Teams organize for projects and begin work.
- Students select an individual project at the end of the Project 8 residency.

For the last project (project nine), students are encouraged to select a project from their own work environment. Each student presents the results of his or her work on this individual project during the last residency. This individual report completes the MBA requirements.

Conclusions and Implementation Lessons

The first e.MBA@PACE program started with 14 students. None has dropped out. A class of 17 students began the second cycle of the program in spring, 2001. The faculty has learned many lessons in designing and implementing this innovative program. Some of these lessons include the following:

Problem-centered learning is an instructional technique that is particularly well suited to distance-based, graduate programs.

The use of an experienced, outside consultant can be important at the outset for facilitating development of this type of program due to its unusual educational format and its dependency on a new technology. In this regard, we found that our consultant made important contributions especially with regard to the speed of program development.

The combination of distance-based learning and residencies builds cohesion between students and the faculty that may be harder to develop in courses and programs that are taught completely at a distance.

The selection of a reliable and effective collaborative software environment is essential to the success of the distance learning aspects of the program. The Internet-based software must be almost transparent to the learning community.

Faculty teams work. The problem-centered instructional technique used in this program is interdisciplinary by its nature. Faculty teams are an excellent match to this type of learning environment. As is the case with any team, it can take time for faculty to learn to work together, especially when it comes to agreeing on specific learning objectives and grading and evaluating students.

Distance education requires different faculty skills. Distance education can involve much more communication between a faculty member and students. Problem-based learning coupled with a need to know, just-in-time approach to the provision of important information can lead to intense bursts of information requests from students. Faculty must be prepared for this dynamic, spontaneous process.

A critical factor in program design is the balance between individual and virtual team workload for students in each team. Students learning at a distance can become easily disillusioned if the nature of the work and the goal of the work are not understood. The student workload must be appropriate to the perceived learning task.
References


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