

Internet MBA: The Managerial Finance Course Online Best Practices and Student Performance

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In 1997, The University of Tulsa began a program to make graduate education more accessible to highly qualified students who couldn't attend regularly scheduled classes due to work, travel and other commitments. The objective was to bring together the faculty at The University of Tulsa and these highly qualified students in an Internet-based, interactive, professionally accredited, cutting-edge program.

The new graduate program in business titled iMBA™ was approved by the University in the spring of 1998. In 1998-99, the largest faculty development program ever at The University of Tulsa was launched. Seminars and summer grants were utilized to aid the faculty and staff in developing web-based teaching skills.

The first class in the iMBA™ program began their studies in August 2000 and graduated in August 2002. In 2001, U.S. News and World Report ranked the iMBA program in the top 25 Best of the Graduate Programs.

During the development of the new program, the use of the Internet and the development of online degree programs were in their infancy. The purpose of this paper is to outline the process used by The University of Tulsa to develop and deliver this new iMBA™ program. Specifically, ten best practices for developing and delivering courses online will be identified and discussed. These ten best practices are the distillation of nearly seven years of efforts in the area of distributed learning. Finally, a specific iMBA™ course will be presented to demonstrate the look and feel of a University of Tulsa online graduate course.

The final section of this paper will compare and contrast student performance in the traditional on-campus MBA program versus the iMBA™ program. The Major Field Test for MBA programs from Educational Testing Service will be used to evaluate the comparative performance of students in both programs. The MBA Major Field Test reflects the basic knowledge and understanding gained in the MBA curriculum. Five Assessment Indicators—Marketing, Management, Finance, Accounting, and Strategic Integration—will be considered.

INTRODUCTION

In 1997, The University of Tulsa began a program to make graduate education more accessible to highly qualified students who couldn't attend regularly scheduled classes due to work, travel and other commitments. The objective was to bring together the faculty at

The University of Tulsa and these highly qualified students in an Internet-based, interactive, cutting-edge program. A feasibility study to deliver a professionally accredited MBA program fully online was completed. The accrediting body is AACSB International – The Association to Advance Collegiate Schools of Business, which is the highest level of professional accreditation for business studies.

That year, a curriculum and complete business plan was finalized and presented to all constituencies including faculty, staff, university administrators, and, most importantly, potential students and employers. The primary focus of the program design was the needs of students. The new graduate program in business titled *iMBA™* was approved by the University in the spring of 1998. In 1998-99, the largest faculty development program ever at The University of Tulsa was launched. Seminars and summer grants were utilized to aid the faculty and staff in developing web-based teaching skills.

The first class in the *iMBA™* program began their studies in August 2000 and graduated in August 2002. In 2001, *U.S. News and World Report* ranked the *iMBA™* program in the top 25 of the Best of the Online Graduate Programs.

During this time, the use of the Internet and the development of online degree programs were in their infancy. The purpose of this paper is to outline the process used by The University of Tulsa to develop and deliver this new *iMBA™* program. Specifically, ten best practices for developing and delivering courses online will be identified and discussed. These ten best practices are the distillation of nearly seven years of efforts in the area of distributed learning. Finally, the Managerial Finance course in the *iMBA™* program will be presented to demonstrate the look and feel of a University of Tulsa online graduate course.

For the purposes of this paper, online refers to courses in degree programs delivered primarily via the Internet to students at remote locations, including their homes. Online courses may be delivered synchronously or asynchronously. An online course may include a requirement that students and teachers meet once or periodically in a physical setting for lectures, labs, or exams, so long as the time spent in the physical setting does not exceed 25 percent of the total course time. This is the *U.S. News and World Report* definition.

PROGRAM DESCRIPTION

The focus of this paper is to define and discuss the best practices of online learning that have been identified in the development of the *iMBA™* program. Best practices are program specific. Best practices for a campus-based program where the online portion augments traditional lectures should and will be quite different from those practices of an online course defined above. Consequently, to discuss best practices, we first need to fully describe the nature of The University of Tulsa *iMBA™* program.

The *iMBA™* program is a flexible graduate program designed to allow the student the ability to take advantage of a quality MBA program regardless of job location or travel schedule. The *iMBA™* program was carefully crafted to meet the needs of our busy students, especially those with demanding travel schedules who are not always able to attend classes on a regular schedule while maintaining the high quality of our on campus graduate business programs.

The University of Tulsa is an internationally accredited institution offering the unique benefits of a private, high quality college education to talented students from Oklahoma,

from across the nation, and from countries around the globe. Our faculty members are exceptionally well qualified and committed to providing the best possible educational experience, both in traditional classrooms and in web-based classes. In the *iMBA*TM online program, our students benefit from the same high quality communication with the faculty and classmates found in our traditional program.

The University of Tulsa *iMBA*TM program is based around the number “two.” It is a two-year lock step integrated program where the students take two courses per semester. Before students begin the advanced curriculum, they must satisfy the requirements of three preMBA or foundation courses. These three preMBA courses may be waived based on prior course work. In addition, the students are required to have two years of work experience.

The program is a Master of Business Administration program following all the guidelines of our accrediting body, AACSB International—the Association to Advance Collegiate Schools of Business. This accrediting body specifies the number of credit hours required to complete the degree, the core content of the degree, faculty qualifications, assessment, and numerous other parameters of the program. In addition to these requirements, our program has a focus on information technology. This theme flows throughout all the courses and, in a sense, is the delivery system of the program. Near the end of the program, there are several electives specifically focused on information technology. However, being an MBA program, it still covers all the core disciplines—including accounting, finance, management, marketing, and operations management.

STUDENT PROFILE

All of the students in the *iMBA*TM program are employed full time. These students travel frequently, both domestically and internationally, and have undergraduate degrees primarily in business with engineering being a strong second. One of the largest industries in the Tulsa area is the oil and gas industry, and this industry obviously has a large demand for students with undergraduate technical degrees.

We began the new *iMBA*TM program at the University of Tulsa for a number of reasons, but the primary reason was the fact that great students make great programs. The students in our program travel frequently and the majority live and work outside the Tulsa area, several of them in other countries. We have had student groups whose members are in four different time zones. We designed our program so that these students would have access to graduate education. They represent fast-track employees at their companies, and are not only traveling but also being promoted to more responsible positions outside the Tulsa area. Our portable *iMBA*TM program provides them this access, and they provide excellent experiences and input to our program. These greatly enhance the learning experiences of all our students.

There are many other reasons why we developed this new program. One was to expand the student base to reduce enrollment risk. When you get too many students from one company or one region, the risks the company faces or the region faces are taken into our program. For example, in our traditional on-campus program, we have a number of students working full time at WorldCom (now MCI) and Williams Communications Group. When these companies began to experience business difficulties, one of the first

things they do is stop supporting development of their human capital through education. This obviously seriously impacts enrollment in our programs.

The same effects are, of course, true for a region. One of the largest industries in the Tulsa area is the oil and gas industry. When it has economic problems, then student enrollment from that industry also has problems. Drawing students from a wider industrial base provides a type of diversification that will reduce this risk. This is nothing different from diversification in a portfolio of common stocks. If we limit our diversification to one security--for example, all students coming from one employer—we'll have a lot more risk in the portfolio than we would have if we spread across many securities. The majority of our students is from outside the Tulsa area and represents many different employers. One of our goals in the program is to increase this diversification.

There are, of course, many other advantages of a diverse student base—many students from different industries, backgrounds and cultures. They see and learn different perspectives and experience and appreciate the issues of working in the global environment.

Finally, given the enormous impact that technology is having on education, The University of Tulsa had to be in this arena from a strategic perspective. We had no choice but to develop our faculty skills in this area to determine how it best complements our current educational programs and how it will help us compete as we begin a new century.

DEVELOPMENT OF DISTRIBUTED LEARNING AT THE UNIVERSITY OF TULSA

While The University of Tulsa graduated its first *iMBA*TM class August 3, 2002, it has been involved in distributed learning actively since approximately 1995, and has been involved in information technology since building the first PC lab in 1982. In August 2002, 27 students received their MBA degree. This was our first graduating class and began with a group of 33 students. In August 2003, 21 students received their MBA degree. At maturity, we would like to admit 50 students a year into the two-year program, for a total of 100 students in the program at any one time.

Early in the 1995-1997 periods, the Internet was used to improve the operations of the Office of Graduate Programs in Business: websites were developed for course offerings, communications, dissemination of information about programs, and online applications. The Internet was used as a teaching tool in select graduate courses on a limited basis. This was primarily the use of Microsoft Front Page and e-mail in combination to develop relatively simple course sites. These early attempts to develop web-based courses did improve the situation when the students had to travel and were forced to miss class. In the summer of 1997, a number of faculty grants were awarded for the development of course web pages. To a large extent, this was a proof of concept to the faculty of the college.

During this time the University was very interested in using technology to enhance campus programs and courses. A campus program was begun to enhance equipment on campus for faculty use, to contract for the software to promote these activities, and to hire a full-time systems administrator to promote faculty development. This ultimately resulted in the selection of WebCT as the "course tools" that would be supported on a campus-wide basis, and the installation of an extensive set of servers to be used exclusively for course development. This anticipation of the evolution of university education by central

administration greatly enhanced the development of the *iMBA*TM program. In a sense, the internal structure was in place and waiting for our program to come forward.

During the 1997 and 1998 period, the College of Business Administration (CBA) developed an extensive business plan for an Internet-mediated MBA program, subsequently named the *iMBA*TM program. Fortunately, that plan was rejected by central administration. Looking back, that was a blessing in disguise. While we had enough early adopters of new technology to bring select **courses** online, we did not have enough skilled faculty to bring an entire **program** online. An entire program like the *iMBA*TM requires skilled faculty in all functional areas of business, and in 1997 the College of Business Administration didn't have these. In addition, comprehensive course tools were not available to develop online courses easily and effectively, as WebCT does today. All we had was an early version of Front Page and e-mail, certainly not at the level we are today. Reviewing today's courses that are presently online suggests we could not have delivered a high quality Internet-based program with just Front Page and e-mail.

To address the issue of limited faculty capabilities, 12 faculty grants were awarded during this period to take an Internet course from the Asynchronous Learning Network and Vanderbilt University. The title of that course was "Taking a Course Online" and the focus was developing online courses in general. In a sense, this was an early version of best practices.

After those 12 faculty completed that Internet course, things fell into place at The University of Tulsa fairly quickly: web pages were used in many traditional campus courses; the campus grew quickly in technology, hardware, software and staff; the Internet improved; Internet service providers grew rapidly; bandwidth increased; and many advanced software packages were developed. Finally, the prices of everything dropped dramatically—hardware, software, and the works.

In the fall of 1999, the *iMBA*TM program was approved by all campus constituencies including faculty, staff and central administration. The business plan was adopted. Seventeen faculty development grants were awarded for course development, and the first three *iMBA*TM foundation courses were delivered the summer of 1999 and the six first-year courses were developed. There are presently 42 students in the first and second year *iMBA*TM classes.

In summary, The University of Tulsa has been focused on information technology and in the Internet course delivery business since the beginning of the Internet. The *iMBA*TM merely represents our packaging a complete set of courses for that degree.

BEST PRACTICES

As stated earlier, best practices are program specific. The following list of best practices and related discussion come from our two-year lock step *iMBA*TM program intended for the fully employed part-time student – a student who needs to have course access while they travel, both nationally and internationally; a student who needs access to course work outside the workplace. If a program has a different design than the *iMBA*TM program, then these best practices may or may not be appropriate. For example, if a student will be studying during work hours, then more synchronous activities may be appropriate. This determination is left to the reader.

Best Practice #1: Extensive Faculty Development

Early adopters of the distributed learning model are not sufficient to populate a complete degree program, no matter what the size of the faculty. Courses are required in each of the functional areas of business to have a professionally accredited degree program. This means that some functional areas of business where technology may not be a focus need to develop technology skills. For example, the understanding of business law is a requirement for an internationally accredited AACSB program. Business law is not necessarily an area where faculty members have information technology skills.

A person planning to teach a course in business law would probably require a lot of faculty development in the area of information technology. All of this must be done before the first day of class, which is not the normal work pattern of university faculty members. The normal work pattern is to prepare the materials several days in advance before the lecture is given. In an Internet-mediated course, most of the course must be prepared before the first day of class – with all exams, projects, due dates and quizzes complete. This permits the student to see the workload required and permits them to balance their other commitments with the program.

As an aside, our business law professor received a teaching award from the first *iMBA*[™] graduating class.

In addition, since the *iMBA*[™] program has two courses per semester and is a program, not a series of courses, it permits the two courses going on simultaneously to be coordinated and the workload balanced across courses. This is not the normal procedure followed in campus-based programs.

All of these activities have to be completed before the first course is taught. This means that faculty course development grants have to be awarded and faculty development seminars developed and delivered. This is a time consuming and a significant front-end cost to an online program. This amount of time and cost should not be underestimated.

Best Practice #2: Use Faculty Teams

All of the 15 courses that compose the *iMBA*[™] program were initially taught by faculty teams. Taking a course online that is part of a degree program requires a broad set of skills. The faculty member represents the content specialist and the software package—in our case, WebCT—is used as a tool to take the course materials from the content specialist and place them online. As a matter of fact, WebCT stands for Web Course Tools and essentially is a template and a set of tools that the faculty, the content specialist, populates. Before we had effective tools such as WebCT, programs used course designers in conjunction with faculty to develop a course. This works but it is an expensive and clumsy solution to Internet-based education. Developing, delivering, and improving a web-based course is a dynamic process and the task needs to be placed directly in the faculty member's hands. As a course progresses, there are numerous changes and enhancements that have to be made. This is especially true when a faculty member is new to the process. This is just like a traditional campus-based course.

Use of a faculty team brings a diverse set of skills together to develop a course. There's just a lot more work to do this than most any faculty realize. It is much more than just a replication of an on campus course. It is a totally new concept and requires a group

of faculty working together to address properly. This also promotes interaction among the faculty to build a learning community and to identify best practices among themselves. These are subsequently shared with all other faculty.

While a lot of things made the *iMBA*TM program at The University of Tulsa a success, this best practice of use of faculty teams carried the day early in the program development. As one faculty member would become tired and frustrated, another would step in and find a solution and continue to develop the course.

Best Practice #3: Faculty Team Leaders

This is largely related to best practice #2, but has some subtle differences such that it should stand on its own as a best practice. Faculty rarely understand the amount and type of work required to take a course online. The use of experienced faculty team leaders in each new course delivered helps address this problem. The use of faculty rotation and leadership helps the team form expectations about the amount and nature of the workload and provides continuity from one course to another such that students can form expectations about the workload. Students “know what the professor expects.” In addition, it gives the program a common look and feel from one semester to the next.

The concept of faculty rotation/leadership works as follows. If a team of two develops and delivers a course online one semester, they will become team leaders in the course development and delivery in subsequent semesters, thus assuring an experienced Internet course developer and faculty member in each of the subsequent courses. The team leader will have the knowledge of many small things that add up to a large knowledge base. There is no substitute for “been there, done that.” The experienced team leader knows a lot of little things, such as who maintains the server on the weekend and what their pager number is, where the system administrator has lunch, and who to call on the faculty when you run out of ideas.

No matter how many seminars and bulletins we developed and sent on small technical issues, nothing helped address the minutiae of developing a course online better than having an experienced team leader.

Best Practice #4: Use Technology Wisely

The University of Tulsa *iMBA*TM program advertises itself as using cutting edge technology. It is tempting to adopt each new application that is developed and remain on the cutting edge, but this practice would be ignorant to the basic mission of education. Newer technologies are not always better learning tools. For example, the introduction of video conferencing is tempting, but for several reasons has not been adopted in the *iMBA*TM program.

While this issue will be addressed in another best practice, here it refers to the fact that a lot of potential students, especially on a worldwide basis, don't have high speed Internet access. The higher the level of technology used, the fewer the number of people who have access to our program, if all other things remain the same. The availability of DSL, T1 and other high speed Internet access is limited to a few on a worldwide basis. One cannot forget that the objective of the *iMBA*TM program is to make available a high

quality graduate education program to those without access to traditional campus-based programs. The evaluation of new technology must keep this basic objective in mind.

Best Practice #5: Use Synchronous Activities Sparingly

Best Practice #4, Use Technology Wisely, refers in general to potential students' access to the Internet. This Best Practice refers to a pedagogical issue.

Early in our deliberations in the development of the *iMBA*TM program and taking courses from the classroom to the Internet, our model generally pivoted about replicating the classroom experience. We envisioned having many synchronous classes where the students would meet with the professor electronically instead of in the live classroom. We even considered videoing the live classroom and making the video available via the web that could be downloaded and reviewed at the convenience of the student. At this time, several book publishers are developing video lectures for their most popular textbooks, attempting to replicate the classroom experience.

We subsequently realized that learning via the web is significantly different from learning via the classroom. The classroom is a passive learning environment where the students sit quietly and listen to the lecturer perform. What we really wanted to achieve was an active learning environment that emphasized asynchronous learning activities with some synchronous activities, such as chat. This encouraged and promoted interaction among all constituencies, including student groups, one to one student interaction, and one to one instructor interaction. These asynchronous learning activities not only maintain maximum flexibility for our students; they provide a superior learning model promoting interaction. In the opinion of the authors, interaction is the key to learning in any environment. Evaluation of student performance in a subsequent section will support the authors' opinion.

Faculty colleagues do not always share the opinions of the authors. That's true in general, and especially true about this issue. We promote our program as the ability to study any time and any place. An ability to study at any place removes geographical barriers, and an ability to study at any time removes both geographical and temporal barriers. In that light, asynchronous learning is superior. Invariably in discussions and presentations about distributed learning, participants refer to asynchronous communication as available but inferior to synchronous communication. Asynchronous communication frequently appears to be the "little brother" of synchronous communication. Synchronous communication uses existing teaching methods of lectures and seminars and makes them available to a geographically distributed group. This is indeed an improvement in the education process, but nothing new.

From a pedagogical perspective, asynchronous communication is the superior alternative promoting an active learning environment and promoting interaction among all constituencies.

Best Practice #6: Build Learning Communities

This best practice has been well documented in the distributed learning literature, but it is so important that it has to be included as a best practice. As a matter of fact, one of the best books in the area of distributed learning is “Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom” by Palloff and Pratt

This Building Learning Communities Best Practice is simply an extension of Best Practice #2, Use Faculty Teams. It specifically means in this example to use student groups extensively, for group projects, for group support and for group interaction. The use of groups encourages interaction. One of the problems that plagues distributed learning is the problem of student retention. People who begin the program do not stay in the program through graduation. There are many possible explanations for this: the nature of the program, the nature of the student, the quality of the program, or any of a myriad of explanations. Our experience has been that as students become members of a group and bond with that group, there is a much higher likelihood of completing a course successfully and completing the program successfully.

In addition, this greatly improves the quality of the learning process and the product of the assignment. Students in a distributed learning format will work on a paper or project sequentially, effectively passing it among themselves and enhancing it at each stage. The end product of this exercise is not just a superior paper or presentation, but creates lifelong learners and promotes group participation in the workplace. The ability to work and participate in groups in both the learning environment and the workplace results in superior student/employee performance. Products of this type of learning environment have self-discipline, self-motivation, and excellent communication skills and seem to enjoy expressing their ideas in writing.

Best Practice #7: Use Generalized Hardware and Software

Those of you from the commercial arena may be somewhat puzzled at this best practice. Your objective is to make your website as easy to access as possible and as easy for your potential customer to navigate as possible. Your objective is to ultimately do some type of commerce with this individual and not to frustrate them.

Somehow academics have lost this objective. It is a common practice, not a best practice, for online programs to provide a “free” preconfigured computer for their students. The websites the students will be accessing are then constructed to be easily accessed and navigated using the versions of the software on the preconfigured computer. This sounds very appealing, doesn’t it, but think of the implications for the *iMBA*TM program. Remember, best practices are program specific.

The students in the *iMBA*TM program are employed full time, having access to the Internet, both in the workplace and at home, and, in addition, travel extensively. When they travel, they frequently carry the company provided computer, also preconfigured for company applications, and/or have Internet access at a myriad of places: for example, in a club at the airport, some type of Internet café, or in the hotel in some way. All these

other possible places to access the course/program website are going to have different browsers and different versions of different browsers that cannot be counted on to dependably access the website. If we follow the preconfigured computer model, the student must carry this computer with them whenever they think they may want to access the website. This is a poor solution. It is convenient for the systems administrator of the course website, but very inconvenient for the student.

A generalized hardware and software approach means a student can access a course website from anywhere with most any browser and browser version. This places the burden of providing a “universal” website on those developing the courses and the systems administrator. Before any changes are released for students to consider, they must be thoroughly checked both on and off campus, with various browsers and various line speeds; all possible permutations have to be considered. The best 24/7 support is done before the website is ever released to the students. This is obvious to the commercial user of the Internet.

Best Practice #8: Best Courses Don’t Make Best Programs

In the early years of using information technology to augment on campus courses, each course could “go its own way” and use the technology that best fit that particular course. The *iMBA*TM program is a series of courses taken over a two year period with two courses taught each semester. Each semester these two courses must be balanced in terms of workload, projects and other assignments. In addition, they need to be balanced in terms of the nature of the course. For example, one would not like to have two heavily quantitative courses in the same semester, nor would one want to have two courses that required a large amount of reading and writing in the same semester.

Some of our students have particular skills in the quantitative area and some of our students are particularly skilled in the written word. Each semester the nature of the work should be balanced such that each student has the opportunity to enjoy their strengths and build upon their weaknesses.

The balancing process also extends beyond an individual semester. It is important to have a balanced and consistent workload from semester to semester such that the students understand what is expected of them.

Best Practice #9: Use Mile Posts

In the passive learning model of an on campus lecture based course, students have the luxury of knowing where they “stand” in the course as the lecture unfolds. They can ask questions to refine their understanding of the material, and their understanding of the lecture is essentially continuous feedback as to their progress. In an active learning environment, much of the responsibility of learning is left to the student. In a graduate program like The University of Tulsa *iMBA*TM this has worked well. However, students need continuous feedback to reinforce their progress. These mile posts may be in the form of practice quizzes, quizzes, short papers, and presentations that are due on a frequent basis. It is important that the students have clear reinforcement that they are properly progressing in the material.

These practice quizzes should have the correct answers identified with a detailed explanation as to why it is indeed the correct answer. These practice quizzes should have the incorrect answers identified as to why they are indeed the incorrect answers. They are learning tools and feedback instruments more than evaluation tools.

Skillfully used, these mile posts can be very effective. Interaction in the distributed learning format is the key; of course, that is the theme of this whole paper. Any trick we can use to encourage interaction enhances the learning process. Sometimes these quizzes, questions and assignments are intentionally vague to force the students to work among themselves and “figure out what the professor wants” and then address the professor directly as to what he/she wants. This ambiguousness, if used correctly, is a very effective learning tool. This has worked extremely well in the *iMBA*TM program which is composed, of course, of only graduate students. In an undergraduate program, it may have a different result, but, as stated earlier, best practices are very program specific.

While many don't like the use of electronic grading and electronic feedback, the immediate feedback to student responses far offsets the impersonality of the computer. Done properly, electronic feedback can enhance the correct response and correct the improper response. There is a skill here observed by the authors that is difficult to explain, but when practice quizzes are electronically graded, the result can be remarkable. This can also be a very work intensive process for the professor. For example, if one constructs a practice quiz of 25 questions with five possible responses, one is required then to construct comments for the correct answer and each of the four possible incorrect answers, or 125 responses for one quiz. This can be very time consuming to do properly, but the benefits to the student are worth the effort.

Best Practice #10: Expect Continuous Improvement

This will be the shortest best practice of all. Expect to change everything you have done every year. In The University of Tulsa *iMBA*TM program, no course has been taught the same way in succession. As faculty skills develop and technology advances, distributed learning programs will need continuous modification. The program will need a budget and development plan to anticipate this. But don't forget—new tools are not always better tools. Cutting edge is not always the best edge.

Best Practices Summary

To develop the above ten best practices, an extensive list of best practices was constructed and the best ten were selected. There are other best practices not reported in this paper. However, the authors believe that the ten best practices outlined and discussed above contributed to 90% of the program's success.

One would be negligent if one did not address worst practices. In some ways, one could say that the best practices above are worst practices just stated in a positive way. But there are two worst practices that the authors feel must be mentioned in this paper and avoided at all costs. These two worst practices are not the result of experiences from the *iMBA*TM but come from comments and discussions with colleagues at other universities.

First is the issue of scaling. It is so tempting to conclude that if you can teach 25 students online, that you can teach 225 students online. This would be the worst practice. From the previous ten best practices, the reader can conclude that a key to education, especially online, is interaction among all constituencies—faculty, students and student groups. As the class sizes get larger, then the interaction must decay simply to the sheer number of participants, messages and bulletins. It is the opinion of the authors that a class size of 35-50 is the maximum for online graduate education, and possibly 15-25 being the maximum for executive education. The first time the Managerial Finance course was taught online, we had over 1,500 e-mail messages and 300 bulletins.

A second worst practice—maybe even worse than that outlined above—is to place poor classroom instructors into the online programs. Poor classroom instructors are poor online instructors, but fortunately the converse is true. It is remarkable how much information is passed along the “wire” of online courses. It’s not just the course material, but also the instructors’ attitude toward the course and the students and instructors’ enthusiasm for the material and teaching pass right along with the other elements of the course. Courses in a distributed learning program are not the place to hide poor or incompetent faculty members.

STUDENT PERFORMANCE IN ONLINE COURSES

This paper focuses on best practices in the University of Tulsa *iMBA*TM program. The authors teach a specific course in that program, Finance 7223—Financial Management. In that course the text used is *Principles of Corporate Finance* by Richard Brealey and Stewart Myers, McGraw-Hill, Seventh Edition. In addition, similar projects, cases and exams are used in both the *iMBA*TM and traditional campus-based MBA programs.

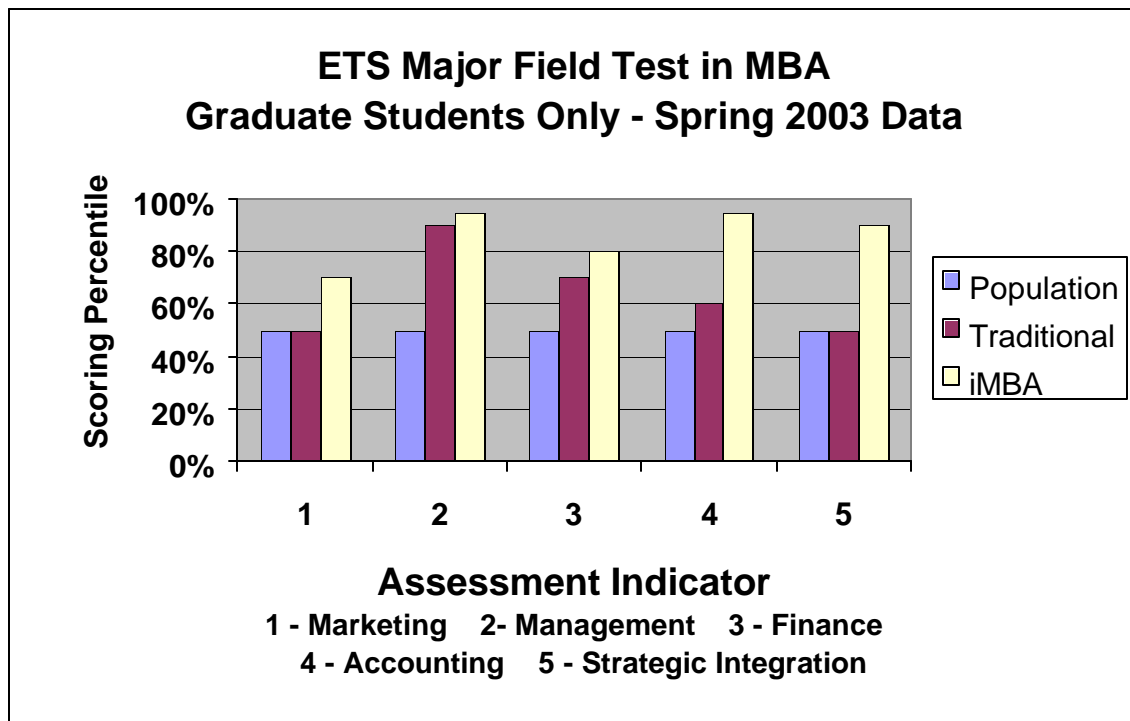
One of the main differences in the two courses is that the *iMBA*TM finance course has three instructors—the two authors of his paper and one other—while the traditional campus-based course has only one instructor—one of the authors of this paper. Otherwise, they are nearly identical in every respect.

For the last several years, we have been comparing the performance of the students in the *iMBA*TM finance course and the finance course in the traditional MBA program. While these comparisons have not been very scientific, our conclusions were that the student groups were performing essentially the same.

The Spring of 2003 we decided to formalize our evaluation process and adopted the Major Field Test for *iMBA* programs from Educational Testing Service. The content of the Major Field Test for MBA programs reflects the basic knowledge and understanding gained in the MBA program. The test is a two-hour multiple-choice exam designed to assess the mastery of concepts and principles as well as knowledge expected at the conclusion of the student’s MBA degree. The tests are administered at the convenience of the individual school and submitted to Educational Testing Service for scoring. The scores for the institution administering the test are returned along with aggregated scores for all institutions administering the test.

The Spring of 2003 41 educational institutions and 1,036 examinees participated. The University of Tulsa had a total of 29 examinees take the test, of which 13 were *iMBA*TM students and 16 were in the traditional MBA program. This is a small group

size and the interpretations must be made with this in mind. However, the average number of students taking the test per institution is 25, so the sizes of examinees at the University of Tulsa of 13 and 19 are not that out of line with the population. The concern about small sample sizes is that one or two students scoring unusually high or unusually low can change skew the results dramatically. The Major Field Test is administered during the last semester of study as an MBA student.



The bar chart shown above displays the results of the Major Field Test for the Spring of 2003 for the five assessment indicators. Assessment indicators for this test cannot be compared to testing years prior to 2003 due to changes in the MBA test that were introduced in 2003. The scoring percentiles shown in the bar chart are percentiles “at or below.” Interpretation of these percentiles is as follows: Taking Assessment Indicator 3 – Finance as an example, the *iMBA*TM student group scored in the 80th percentile, which means that at least 80 percent of the 1,036 students taking the test in Spring of 2003 scored at or below that level.

The first striking thing that is evident from looking at the bar chart is that the *iMBA*TM student group outscored the traditional student group on all five of the assessment indicators. One can clearly make the case that distributed learning is “as good as” traditional on campus education.

The next point to be made from the bar chart is comparing the different types of assessment indicators themselves. Many people claim that certain types of courses are easier to deliver online than others. For example, many claim that finance is an easy course to deliver online because it involves mostly numbers and not very many concepts, while management is difficult to deliver online because it is mostly conceptual in nature. The authors don’t believe this, and the results don’t support this. Assessment Indicator 2

– Management and Assessment Indicator 3 – Finance suggest that the students performed better in management than they did in finance in both *iMBA*TM and traditional student groups. On the other hand, Assessment Indicator 4 – Accounting where the students scored in the 95th percentile in the *iMBA*TM program is significantly higher than the score for Assessment Indicator 1 – Marketing where the students scored in the 70th percentile.

Characterizing finance and accounting as technical courses and management and marketing as conceptual courses, one cannot make an argument for ease or difficulty of delivery being dependent on the type of course.

The number of students in these two groups is small and interpretations must be made with that in mind. However, admission requirements for the two student groups are identical except that the *iMBA*TM program requires two years' work experience. So the difference in performance could be that the *iMBA*TM students are more mature and more motivated.

In summary, the assessment indicators of the Major Field Test for MBA's indicate that distributed learning is not the "weak sister" of traditional on campus education at the graduate level. In fact, the results suggest just the opposite. Not everyone learns in the same way. Distributed learning gives the students alternative ways to master the material, not just one of coming to campus to "sit and listen."

SUMMARY AND CONCLUSIONS

Distributed learning has found its place in the educational process, in both corporate and university settings. This paper suggests and demonstrates using standardized testing that an active learning environment is superior to a passive learning environment. An active learning environment can be conducted very effectively using the Internet. It is hoped that the comments and thoughts contained in this paper will encourage the reader to consider the distributed learning alternative and make the development and implementation process effective and enjoyable. That has been our experience at The University of Tulsa.