

Technology Use in an Online MBA Program

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Compared to courses delivered in face-to-face setting, courses that were delivered entirely online rely more on technology (Bonk, 2001; Firdiyewek, 1999; Moore, 2003). Technology, especially the Internet, provides a common virtual space for students and instructors who are physically separated; it is widely acknowledged as an essential component of teaching and learning environments in online setting.

As more and more technology tools become available for online education, there is increasing interest among educators and other professionals in the potential application of the tools in online courses (Hanna, 2003; Moore, 2003). For instance, some researchers argued that a course management system (CMS), a collection of such software tools such as asynchronous discussion boards and real time chat tools, has the potential to transform teaching and learning (Ansorge & Colley, 2003; Carmen & Haefner, 2002). At the same time, researchers realize that technology tools, like other tools human beings developed, can be used in profound as well as very trivial and careless ways in educational practice (Althausser, R. & Matuga, J., 1998; Ottenhoff & Lawrence, 1999).

This particular case study was conducted in an online MBA program at a large Midwestern university. This online graduate program has been running for more than 5 years and it has experienced exponential growth in student enrollments and a very high student retention rate. Even though online MBA programs have seen extremely rapid growth in recent years in the U.S., there are still some obstacles and challenges to delivering engaging and motivating learning experiences online. Also, online instructors call for more guidance on how to effectively facilitate and motivate student learning with the help of distance communication technologies. How different technologies are used in an online graduate program and the benefits and challenges of using different technologies in an online program will be introduced.

Methodology

Data were collected in this case study from following ways: interviews, focus group, survey, and content analysis. Nine researchers including the two authors participated in the data collection.

Interviews: 26 online instructors of the MBA program were interviewed in person. 20 second-year online MBA students, who just finished their first-year study and was about to start their second academic year of the program, were interviewed also in person during the one-week orientation program held on campus. Each interview took 30-45 minutes.

Focus Group: 10 second-year online MBA students participated in four focus group interview sessions (i.e., five students per sessions) held during their orientation program. The focus interviews were also held in a meeting room on the campus and took 45 - 60 minutes.

Survey: 102 second-year public online MBA students were surveyed. The survey instrument consisted of 67 questions regarding their perceptions and attitudes toward the online MBA program. The survey instrument included multiple choice questions, 5-point scale Likert type questions, and some open-ended questions. The paper-based questionnaires were handed out to the students who were present at the one-week program orientation session held on campus in the summer of 2004. 102 second-year students

returned the survey, which accounted for almost 100 percent of the return rate.

Content Analysis: 27 online courses were analyzed by two researchers independently based on the agreed themes including course structure, technology interactivity, instruction interactivity, social interaction, team/collaboration, degree of learner control, and assessment. The final inter-rater reliability was .81.

Results

This online MBA program uses the ANGEL course management system. About 12 percent students surveyed see ANGEL as one of key strengths of the program. About 93 percent of the respondents expressed their satisfaction with the course quality. The use of such technologies as email, asynchronous discussion, synchronous discussion, video/audio clips, PowerPoint Lecture File was examined in depth. Because of space limit, only some results were reported in this paper.

E-mail

Of the 27 courses evaluated here, 26 used emails as a major communication tool. It's typically used at the beginning of a course, such as when faculty members will send emails to students to briefly introduce the course. All faculty members in the 26 courses provided their email address to students, and most encouraged students to contact with them if there were questions. Not surprisingly, email was usually used to answer individual questions that students do not want to ask or cannot ask in online class discussion forums. A few faculty members allowed students to turn assignments in using email. Sometimes, email was used to send important reminders or announcement to students. In fact, some students prefer to get announcement through email, rather than through ANGEL web pages.

Faculty interview results revealed that faculty who like writing tend to view the emailing process as a highly enjoyable aspect of teaching online. This finding indicates that what faculty enjoyed in teaching online was associated with their personal characteristics.

Asynchronous Discussion Forum

Asynchronous discussion forums were used mainly in two ways. One was for whole class discussion, 85 percent of the examined 27 courses used this kind of forum. The other was used for team work discussion, which was only used by 4 out of 27 online courses (15 percent).

Instructors agree that online discussion was the key to online interaction. The ways that instructors used asynchronous discussion forum were different. Types of discussion forums include whole class discussions, court forums, student coffee houses, self-introduction forums, and expectation expression forum. Although many faculties agree on the role of instructor, the range of facilitations showed a wide spectrum of moderating strategies and interaction frequencies. On the low end, approximately half of the instructors rarely moderated online discussions. On the high end, a few instructors participated extensively in online discourse through a variety of facilitating techniques including questioning, prompting responses, probing discussion with more questions, redirecting the flow of discussion, recognizing good posts, summarizing discussion, and modeling social presence. Providing discussion questions was the most common way for instructors to start asynchronous discussions. Instructors of 19 courses (70 percent) provided discussion questions at the beginning within the discussion forum, and most other instructors provided questions and directions in assignments. It was extremely rare that an asynchronous discussion forum was built without questions given to solve. Asking and responding to instructor questions are the major student activities in the discussion forum in all courses in the program.

Instructors noted several issues that affected the degree of their presence. For instance, a few instructors expressed concerns about not knowing effective moderating strategies to promote peer interaction. A few instructors were concerned about the time commitment associated with facilitating online discussion. In addition, some instructors were concerned that the authoritarian role of the online instructor might deter a fruitful peer discussion among online learners. Many instructors also noted that the negative effect of “time lag” in asynchronous discussion could easily cause “dominance” issues in discussions because early students can take control of the forum by effusive comments, so some instructors provided clear guidelines to ensure students’ equal opportunities in contributing to the discussion. For instance, some incorporated rules so that students could not post on the first day of an assignment or discussion so often. Such instructors hope students can read others’ postings in the discussion forums and learn through observing how others respond to emergent questions and problems.

Synchronous Communications

Synchronous communications in the online courses include chat room and Microsoft Office Live Meeting service. Live Meeting service was used in just 3 courses (11 percent) for virtual office hour. However, there were 11 courses (41 percent) that used this communication form for class discussion and 5 courses (19 percent) that incorporated it for team discussions.

Synchronous conferencing tools might enable students to bring more issues to the attention of their instructors as well as their peers as they interact and provide just-in-time course feedback. Emerging mobile technologies further expand the horizon of online learning with increased learning accessibility. Two strategies were found most effective in using synchronous tools. One was office hours, which was reported as effective for reducing the repetitive questions asked in email; another was guest speakers, which was found as a convenient way to invite practitioners into an online course.

Problems instructors and students identified with using synchronous tools included limited tool functionality, time schedules, typing, hard to moderate. Among other issues, during the interview, faculty expressed their hope for chat tool improvement. One faculty member mentioned that he felt extremely frustrated with the tools when he conducted online chatting. He would prefer to have the chatting tools to support him to type any length he wanted and track what each student said more conveniently.

Except synchronous chat room, which has to be set by instructors, there is also a need for making the online environment support text-based instant messaging. In fact, some students noted they want to see who is online. There are no audio/visual-based cues for synchronous communication in the Angel system. Both faculty and students expressed hope, however, for integrating other forms of synchronous communication method, such as video-conferencing. One faculty member, in fact, mentioned that he would love to do video-conferencing but he was not sure how to solve some technical problems that often appeared when using such technologies: problems that were typically not on his end but with the reliability and stability of technology connections themselves.

Online Test Tool

Our review of online testing tools in Angel included its interactive quiz and exam function. 18 courses (67 percent) used online quizzes. Of these 18 courses, 7 used quizzes as one way of assessment. After students finished a quiz, they could view the answer. Here, 13 courses (48 percent) used online test tool for midterm and final exams. When using the exam function, students download exam files instructors put in the system, and then they must upload them when they finish. Instructors can view the student exam time, and upload single or zipped graded student exam file.

Some faculty wanted the system to provide better test functions. For instance, one faculty member reported that he would like students to be able to take quizzes and obtain their grades online but not see the answers so that they could retake the tests many times. Cheating is another problem some faculty members were concerned about, even though most faculty members believed the students were responsible and highly self-motivated to learn. However in terms of the quiz tool, as one faculty noted, when knowing it is possible to cheat, he is bothered. Some solutions might exist: one is to establish a same test time for all students. However, the students are in different time zones and have different work schedules. Another solution is to give different students different questions, but this will involve huge workload for already occupied business faculty. Neither of these is easy to apply in this program. Fortunately, online plagiarism has not been a real problem yet. Only very few faculty members expressed concerns about this. Perhaps with most of their students working fulltime and scattered around the world, there is actually less cheating in this particular online program than in traditional classrooms. Additional research might explore this topic further.

Online Video/Audio Clip

About half of the 27 courses (12) used audio/video clips in their courses. Among these courses, more than one-third of the 27 courses (10) used self-introduction video clips, and also more than one-third of the 27 courses (10) used course content-related video clips. The self-introduction video clips were recorded and edited by program technical support persons and were in similar formats. Some of these courses burn the audio/video clips on to CDs and distribute them to students, which is welcomed by students. Our student interview data revealed that some students hope more audio and video components can be added to their online courses.

Many instructors agreed on their “designer” role of repurposing learning materials from the traditional classroom to online courses. Due to the loss of real-time interaction and rich contextual cues that they had experienced in the traditional classroom, it was essential for instructors to provide much more elaborate information in their online courses. As an example of this change, one instructor mentioned that it was important for him to add video sound clips to “enriching the material” and the presentation “as much as possible”.

Summary and Discussion

A few key themes emerged from the research. Results of this study revealed several considerations for integrating different technologies in an online graduate program and how to use these technologies to build a better online learning environment for distance education students.

The fact that it is the only MBA online program among top 20 MBA programs nationwide seems to be a key reason why some students have chosen to study in Kelly Direct MBA. 60 percent of the students who answered this question (N=98) think the flexibility is a key strength of the program. Due to their fulltime work, students seem to highly appreciate the opportunity to learn anytime and anywhere. One student wrote “Flexibility, if it wasn’t online I wouldn’t be getting an MBA.” These are the advantages technology provides for us.

About 80 percent of the respondents agreed that their instructors used various instructional techniques to foster student’s critical and reflective thinking. However, it is important to point out the significant difference between male and female students perception of technologies on learning effectiveness. Male students thought that tools and technologies used in the program foster deeper learning significantly higher than female students did.

It is interesting to note that some faculty appeared to hold a more balanced view towards the advantages and disadvantages of teaching online. Only when it comes to more sophisticated technologies or time to learn new techniques, instructors varied in their usage.

The most popular tools used are (in order): announcement, email, asynchronous discussion forums, online hand-in system, interactive quiz tool, and PPT slides, though each was used in more than 56 percent of the courses. The results indicate that instructors and students were accustomed to use text based application tools. On the other hand, they seldom used audio-based or video-based application tools. The low use of audio-and video-based application tools resulted from the fact that such application tools required instructors and students to acquire additional technical skills. Another fundamental cause of hesitation in use of such tools was rooted in increased demand for additional time and effort within online teaching and learning environments.

The findings reveal that even though teaming approaches have been widely used in online MBA courses, the appropriate tools provided for effective teamwork are still lacking. This interpretation is consistent with a recent study by Kirschner and Van Bruggen (2004) which stressed that current collaborative technologies for teamwork tend to be designed for mechanical functions of basic communications, but are of limited use for supporting teaming activities. Many online instructors have applied the virtual teaming approaches into their own courses with an underlying goal of achieving high standards of online education. However, the findings reported in this study suggest that online instructors tended to replicate the residential settings as much as possible in online environments. They failed to take advantage of many technological possibilities for promoting collaboration. Consequently, the technological potential of the Web was not sufficiently utilized to enhance course interactivity and teaming activities in their programs.

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Biographical Sketches

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