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The Results of Online Teaching: A Case Study

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Abstract

Advances in information technology (IT) pose new challenges for traditional higher education universities to prepare faculty members to teach online courses with technology (e-teach). Online distance learning has attained acceptance in many work environments, mainly in the government, high-tech segments and academia. This study presents an exploratory investigation designed to identify some advantages and disadvantages of distance learning. Seventeen students from one MBA course took part in this investigation. The results showed that the best advantage of online courses was "Flexibility" from the student's perspective. Implications of the findings can direct the subject university to expand its infrastructure to support an ever increasing student enrollment through online course offerings.

Keywords: Online Learning, Information Technology (IT), Face-to-Face Teaching, Advantages, Disadvantages, Distance Learning (DL)

1. INTRODUCTION

Advances in information technology have presented new challenges and opportunities for teaching and learning in traditional higher education institutions (Ma, 2004). E-learning, also known as online distance learning can be defined as any curriculum delivered to a student separated by time or space from an instructor. Distance learning is used interchangeably with on-line learning, web-based learning, computer-based learning, and E-learning. E-learning covers web-based learning, digital collaboration, and virtual classrooms and the delivery of content via the Internet. Distance education is not a new concept. As Christner (2003) indicates, distance education was known as far back as the mid-19th century when it was referred to as "correspondence courses". E-learning allows higher education institutions to target adult learners. Continuous technological advancement in computer processing and the introduction of expanded communications via the Internet, provide the platform for an ever increasing population to

benefit themselves of online educational opportunities. Improved computer software and hardware are readily available and considerably more affordable; which allows individuals to access digital information with relative ease. The number of students enrolled in online course has more than doubled in the past five years, from "483, 113 in 2002 to 1,501,005 in 2006" (Romano, 2006). This is due to the rising demands for skill acquisition in a knowledge-based global economy (Chen, Gupta, Hoshower, 2006). However, the examination of e-learning literature shows mixed reports on how traditional higher education institutions make the transition to become hybrid institutions that offer both face-to-face and online courses (Carlson, 2003; Cheng, 2008; Ma, 2004; Zemsky, Massey, 2004).

The paper is organized as follows; identification of the research question, method, process and limitation; explanation of concept development; and presentation of the research findings. The final section presents conclusion.

2. RESEARCH QUESTIONS, METHOD, PROCESS AND LIMITATION

The research presented here draws upon social system theory in the functionalist sociology defined by Burrell & Morgan [Burrell, Morgan, 1979]. The viewing of a problem as whole is termed the system approach. There are various specialized framework for the systems approach, for example general system theory. This paper approaches its subject matter from an objectivist perspective. The author has direct experience with some of the advantages and disadvantages of online learning and the role that it is playing in higher education today. The research approach is based on a literature review and the author's experiences as a CIS/MIS/IT professor at various universities.

2.1 Questions

Some of the research questions are as follows:

- -What are the advantages and disadvantages of online courses?
- -How is the online diploma prestige compared with non-online degree?
- -Are these degrees as respected as those presented in a traditional way?
- -Are some schools becoming degree producer?
- -Has the production gone too far?
- -Do the students prefer online course over traditional face to face course?

Hypothesis-1: The main advantage of online courses is flexibility and allows working at any time and location.

Hypothesis-2: The main disadvantage of online courses is no face to face contact with instructors and others.

2.2 Methodology

The objective of this study was to find out about the advantages and disadvantages of distance learning (DL). A questionnaire was designed based upon the concepts of distance learning advantages and disadvantages. The questionnaire was comprised of 22 questions. Some of the questions were designed as open-ended questions. The questionnaire was pre-tested by some MBA students before sending them out. The ques-

tionnaires were sent out to seventeen MBA students taking an online course, MBA780-Management Information Systems (For the purpose of confidentiality, the name of university is not disclosed). The answers they provided were confidential and did not affect their course performance/grade in any way. Participants were not required to identify themselves; the name of the respondent on the questionnaire was optional. Over 80% of the students who participated in the study had full time jobs. In total 13 questionnaires out of 17 questionnaires (76%) were returned. After collecting the questionnaire, the author analyzed each question from each respondent and summarized the data in three tables.

2.3 Process

From the author's point of view, good research requires a sequence of well defined steps planned in advance. The steps in this study include:

- -Generate research idea
- -Review literature
- -Develop concepts
- -Design questionnaire
- -Pre-test questionnaire
- -Collect data
- -Analyze data
- -Publish results

2.4 Limitation

As with any research, this study has limitations. The data were obtained in one online MBA course which had seventeen students. Also, all students that participated in the study were from one state (i.e., NC) in USA. Furthermore, the questions in this study focused on the concept of advantages and disadvantages. Further studies might identify additional factors related to the pros and cons of distance learning. Data analysis section focuses on advantages and disadvantages questions due to space limitation.

3. CONCEPT DEVELOPMENT

3.1 Advantages and Disadvantages:

Online education is ideal for non-traditional students who may be working full-time and cannot take face to face courses. Unlike tra-

ditional universities, online learning can be worldwide and location free. For most online courses, all a student needs is a computer and Internet access. Education is therefore available to nearly anyone in any location. The universities which offer online degrees are able to reach students throughout the world. The traditional services are no longer needed. The university certainly raises its income by adding more and more students to class rosters. A traditional single class could have 20 or 25 students whereas online class can have 50 or more students. This improved enrollment increases the tuition base generated by the university. Therefore universities can close buildings, reducing air conditioning, maintenance, heating, security, and other similar costs (Moore, Winograd, Lange, 2001; Shaw, 2006). Student bodies are now comprised of students from a wider range of ages, backgrounds and qualifications, and also from groups traditionally disadvantaged - ethnic minorities and people with disabilities (Ashwin, 2006). This growing demand for higher education placed colleges/universities in a new situation where they needed to respond to the needs of the new student body, considering limited funding, in order to be able to succeed (Jara, Mellar, 2007). Online education provides both faculty and students the ability to work at home if the weather is not favorable for commuting to schools. Some people are not early morning persons so they have difficulty to take course early morning. Many students have this problem, i.e., they do not like early morning classes and their learning is not efficient because they are sleepy. With online course this is not an issue. Online courses provide both student and faculty with the option to utilize the latest in technological educational advances as part of the class pedagogy. One of the important learning practices in any class is student discussion. As mentioned above, the faculty member needs to make sure that students are involved in this process. There are students who will avoid speaking out and the typical lecture discussion approach lets students hide even as they are sitting in the class room. Discounting the fear reason, there are simply some students who prefer not to involve themselves in the dialog. By using information technology, a professor can assess exactly who is and who is not participating in course activities. (Palloff, Pratt, 2001). By taking online course one

would gain a certain level of computer expertise. The more a person uses the computer, the more comfortable one becomes with the computer as a tool. Online learning usually does not allow for the development of face to face interaction. Ability to state ideas clearly and the verbal skills are also important for the successful manager. More, presentation skills are also often required in the work place. Conflicts among participants are not a big issue in online courses, because of only minimal interaction between participants. Online learning may provide interaction with the use of chat rooms, discussion board and emails. Problems may arise, though, when trying to comprehend the personalities of the group's members if the only method of communication is computer! In a face-to-face course, student interaction can improve the learning effect for them. In online course you are not being able to see your audience. So online learning does not permit for full feedback. Having a rich feedback helps to have an effective communication. Words can have various meaning to different people and they may have disparate meaning in various context. Verbal feedback with face to face communication can convey a very rich message along with our feelings. This lack of visual feedback can reduce the learning objective that takes place in the course. Experience has shown that they will fail whether due to hardware failure, software failure, viruses and so on. Online learning depends on this machine (See Table-1 for a summary).

4. RESEARCH FINDINGS

4.1 Data Collection

The questionnaire was pre-tested by two MBA students and refined after the pre-test. Questionnaires were sent out via email to all 17 students who took MBA780-MIS in summer 2007. The online course was conducted on Coursecompass (powered by BlackBoard) provided by Person Higher Education. The author has taught this course using the same platform for the past seven years. Previously the author taught the same course for various universities both face-to-face (past 15 years) and online using different platforms. This course was not delivered 100% online. The lectures, quizzes and cases were conducted online. But, the orientation session, mid-term and final exams were

delivered on campus; those sessions were mandatory. One student representative collected the questionnaires on the last day of class (before final-exam and group presentations). Thirteen questionnaires were returned. See Table-2.

4.2 Data Analysis

Question six focused on advantages of an online course for MIS. The respondents had to rank the advantages by choosing "1" as the biggest advantage and "5" as the smallest advantage. The author used weighted scoring technique against those criteria (advantages) in the following table to find the biggest advantage. The 8th row in the following table shows the weighted score. In order to obtain the weighted result (WR), this formula ($WR = R_x * WS_x$) has been used where x is the refereed to related WS number in the column. As the last column, Total Weighted Result (TWR) in Table-3 shows the best advantage of online courses is "Flexibility" from the student's perspective. The next best advantage is location free ("Can be taken at home or work").

Before the findings of this study, the author as well as many of his colleagues anticipated the cost issue as one of the main advantages. But, the study showed that cost issue is the least important advantage from student perspective; it may be different from the educational institution's point of view.

Next students were asked to rank the disadvantages of a MIS online course using a similar scale. The same weighted scoring technique was applied and results in Table-4. The respondents had to rank the disadvantages by choosing "1" as the biggest disadvantage and "5" as the smallest disadvantage. The author used weighted scoring technique against those criteria (disadvantages) in the following table to find the biggest disadvantage. The 8th row in the following table shows the weighted score. In order to obtain the weighted result (WR), this formula ($WR = R_x * WS_x$) has been used where x is the refereed to related WS number in the column. From the student's point of view the biggest disadvantage of online courses is "not having constructive feedback on complex concepts" followed by "more time constraints on online tests" and "no face-to-face contact". This proves that hypothesis-2 is not the main disadvantage of online courses.

5. CONCLUSION

Distance learning is not new; however, it has not received respect in the academic world because of some of the problems presented here. Results showed that e-learning allows students and instructors work together on a course around the clock. Online learning permits educators and students to exchange ideas and information, work together on projects, around the clock, from anywhere in the world (Hiltz, 1994). Successful characteristics of online learning are beginning to be well researched and founded. Included among those attributes are faculty buy-in and support, a strong organizational structure, good relationships across all student services units, an online culture or center that supports student learning and continues commitment to maintaining infrastructure and technology (Mathews, Pickar, Schneid, 2007).

This study has discussed several advantages and disadvantages regarding online learning in the higher education environment as supported by research findings. The online learning environment is just another learning environment, in some ways similar and in some ways different than traditional classrooms. As we develop the environment, we adjust our teaching methods. This is true for online learning. It is evident that substantial growth has been seen in the whole world, by the number of institutions offering complete studies or courses via distance learning (Mateo and Sangra, 2007; Allen & Seaman, 2007). The real question is how far can we go with online learning? Would you go to a physician that received an online MD degree? Would you employ a computer programmer that received an online degree? Would you go to a school whose professors/teachers have received online degrees? I leave the answer to you but consider the findings of this study. According to a report by the Sloan Consortium, online registrations nationwide are increasing "substantially faster than the overall higher education student body....with 3.2 million students taking a least one online course during the fall 2005 term...an increase over the 2.3 million reported in the previous year" (Allen & Seamon, 2006). This tendency is the fastest and most significant trend impacting enrollments in higher education today. From the author's point of view, there is no doubt that we should use online learning in higher edu-

cation. The question is how many courses (or percentages) within an undergraduate/graduate program? Theory is important for researchers. Researchers who proceed without theory rarely conduct top quality research. Concepts are the main building blocks of theory. (Sagheb-Tehrani, 2006). This study presented a lot of data related to distance learning (DL) which can be used for further research and concepts development. One may use the findings of this study for developing a conceptual model for distance learning.

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APPENDICES

Table-1: Advantages and Disadvantages

Factors	Advantages	Disadvantages
Location free	X	
Lower cost	X	
Additional university income	X	
Bring disparate students	X	
Bad weather	X	
Latest information technology	X	
Force interaction	X	
Any time take break	X	
No face to face interaction		X
Complex concepts		X
Feedback issues		X
Interruption		X
Computer Failure		X

Table-2: Basic Data

Factors	#	%
Questionnaires Returned	13	76
Questionnaires not returned	4	24
Female students	8	47
Male students	9	53
Undergraduate degree from other universities	10	59
In-state students	17	100
CIS/MIS/IT degree	4	24

Table-3: Shows data related to advantages

R^* = Rank, TWR =Total Weighted result, X = related column number **Formula:** $WR = R_x * WS_x$

Factors-Advantages	R*1	WR	R2	WR	R3	WR	R4	WR	R5	WR	TWR
Flexible and allows to work at own pace and rhythm	12	60	1	4	0	0	0	0	0	0	64
Can be taken at work or at home	4	20	5	20	3	9	0	0	1	1	50
Will have clearly defined objectives and content	1	5	3	12	3	9	5	10	1	1	37
Can learn much more and faster	2	10	3	12	3	9	3	6	2	2	39
Lower cost	1	5	2	8	2	6	2	4	6	6	29
Others	0	0	0	0	0	0	0	0	0	0	0
Weighted score (WS)	5	-	4	-	3	-	2	-	1	-	-

Table-4: Ranking of Disadvantages

R^* = Rank, TWR =Total Weighted result, X = related column number **Formula:** $WR = R_x * WS_x$

Factors-Disadvantages	R*1	WR	R2	WR	R3	WR	R4	WR	R5	WR	TWR
There will be no face-to-face contact with other participants and speakers	2	10	5	20	0	0	2	4	4	4	38
Will be frustrating to take considering the current state of hardware/computers in my office or at home	1	5	1	4	2	6	2	4	7	7	26
Will not provide constructive feedback on complex concepts	6	30	3	12	2	6	0	0	2	2	50
More interruptions while taking the course online rather than interruptions in the classroom	1	5	0	0	5	15	4	8	3	3	31
More time constraints on online quizzes and tests	3	15	2	8	3	9	2	4	3	3	39
Other	0	0	0	0	0	0	0	0	0	0	0
Weighted score (WS)	5	-	4	-	3	-	2	-	1	-	-