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Instructionally Designed Classrooms and the Dropout Rate of Distance Learners

Melody J. Buckner

CTE 691

Northern Arizona University

Chapter 1

Introduction

Distance learning is becoming increasingly popular as a method of gaining an education.

Recent developments in technology and economic forces are encouraging the spread of this type

of learning. Even though distance learning is not new, the Internet has transformed distance

learning into a worldwide educational arena with no boundaries. Universities are now using

more powerful computers and networks to deliver education to anyone, at any time and at any

place. We are no longer confining education to the university campus or to the academic

schedule (Katz & Associates, 1999). Corporations, governments, individual businesses,

elementary and secondary schools are also using distance learning via the Internet to educate

their people.

There are some issues that need to be addressed as this wave of technology comes to

shore. Even though many institutions are taking advantage of the distance learning

opportunities, continued success may be in jeopardy because of the high dropout rate (Stumpf,

McCrimon & Davis, 2005).

Exploring students' expectations about distance learning and understanding why they

drop out of online courses could be the key to solving the problem. One area that may have an

impact upon a students' success in distance learning is in the design of the online classroom.

Could this lack of design be a major factor contributing to the high dropout rate?

Purpose of the Study

The main purpose of this study is to explore if there is a relationship between the dropout

rate of students taking classes in a distance learning environment and the design of that distance

learning classroom. The researcher will gather data on the dropout rate in classrooms that have

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been created by an instructional designer versus classrooms that have not been instructionally designed. This research study will also help to discover the reasons why the students discontinued the distance learning experience and will ask them about their expectations of the distance learning course.

The questions that will be addressed in the survey will include:

1. What reasons do students give for dropping out of distance learning classes?

2. What are special issues that face students who journey into distance learning?

3. What do students expect from a distance learning experience?

4. Is the dropout rate lower in classrooms that have been instructional designed?

With the growth of distance learning there is a real need to discover why students may not be successful in the distance learning environment. There have been several studies that cite reasons for the dropout rate in online courses, but this study will mainly focus on if the design of the classroom has any effect on the dropout rate.

Significance of the Study

The results of this study could have a major impact upon the field of instructional design. If one of the reasons that students are dropping out of distance learning classrooms is because of poorly designed classroom environments, then using instructional design principles could help to eliminate this problem. The major significance of this study would be to find out if classroom design makes a difference in the success rate of students in distance learning environments. Educational institutes need to be concerned with the drop out rate for a couple of reasons. Money is a major factor, but the reputation of the school could be at risk. When students dropout of a course, they could lose confidence in their ability to complete a degree. Every

educational institution should help students to succeed. Lowering the dropout rate is one way that this could be accomplished.

Definitions

One area that needs to be clearly defined in this study is the function of an instructional designer. An instructional designer has a role that is unique. They are often a leader and a subordinate at the same time (Pan, Deets, Phillips & Cornell, 2003). They assist the teacher in setting up a distance learning classroom, yet they are not the ones who have the content knowledge or will be facilitating the classroom.

So how will they make a difference in a distance learning environment? Compare the instructional designer to an architect. A contractor can go and build a functional house, however when an architect is involved in the process, the environment becomes more effective. The structure will fit in and enhance the environment; it will feel more natural and comfortable to the user; it may excite or challenge the user and most importantly it will function properly and fulfill its total purpose (Troupin, 2000).

Chapter 2

Literature Review

This is an exciting time when education and technology are just starting to intertwine to bring education to students with fewer barriers. However, there are some issues that need to be resolved to assist students in becoming successful in the distance learning environment. Defining students' expectations of their distance learning experience and investigating reasons why students drop out of distance learning courses could help to prevent this rapidly expanding form of education from collapse.

The National Center for Educational Statistics (NCES) reported, during the 12-month 2000-2001 academic year, an estimated 3,077,000 students were enrolled in distance learning courses offered by 2-year and 4-year institutions (NCES, 2003). Among the institutions that offered Internet courses during the 2000-2001 academic year, 88 % plan to start using or increase the number of courses using asynchronous computer based instruction (NCES, 2003). These statistics show that institutions for higher learning are definitely expanding their use of distance learning for the educating of their students.

The major problem facing new and exciting forms of learning is the dropout rate. There are more than a few barriers to overcome in educating people to use a distance learning environment. In a recent report about distance learning from *Chronicle for Higher Education* it was noted that institutions have reported a dropout rate ranging from 20% to 50 %. And the distance learning dropout rate is about 10% to 20 % higher than in the traditional classroom settings (Frankola, 2001).

This study will investigate some areas that might give some insight about the dropout rate. The investigation starts with the reasons that students' dropout of distance learning course. Then it goes a bit further to look at special issues that face the distance learning students. Another area this study will address is the expectations that students have about the distance learning environment. And finally, it will get to the heart of the study which deals with instructionally designed classrooms and the effect they may have on the dropout rate. This could give some insight into the reasons that students' dropout of distance learning.

Reasons for Dropping Out

Students give an array of reasons for dropping out of distance learning classes. As far back as 1977 a study was performed in the British Open University addressing the issue of

reasons students drop out of distance learning programs. About two-thirds stated personal or domestic reasons, including time, financial, and childcare. Sixty percent dropped out to study other areas, while forty percent were dissuaded by the nature of the course or by the teaching method (Cookson, 1990).

In a more recent study by Corporate University Xchange, some other reasons for dropping out are cited. They include: lack of time management skills, lack of motivation, problems with technology, lack of student support, poorly designed course, and substandard/inexperienced teachers. In both studies, lack of time is still the top reason for dropping a course (Frankola, 2001). These reasons could also be use for why students dropping out of a traditional class.

Another study conducted at the University of Illinois at Urbana-Champaign focuses on factors, which influence a student's decision to drop an online course, reveals even more reasons: information overload, learning environment was de-personalized, learning of technology overwhelmed the learning of content (Willging & Johnson, 2004). Another interesting find in this study was that males are more likely to drop out than females, and that age is not really a factor in the dropout rate.

A survey aimed at determining student dropout rates and dropout causes concerning the students in the Hellenic Open University found many similar factors, but there were a few differences in results. Age did make a difference in their study. It showed that older students were more likely to drop out and that gender was not a factor. They also reported that students' family status was not related to dropout rate. Again, time was the number one factor in the decision to drop out of the online course (Xenos, Pierrakeas & Pintelas, 2002).

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Other observations of why distance learners drop out of courses include feelings of isolation, anxiety of how to perform, how to succeed and confusion on navigating the distance learning environment (King, 2002). These are just some of the reasons that students give for dropping out of course and most of these reasons can be cited by students taking traditional classes. However, there are some specific issues that only distance learning students have to encounter when taking a course.

Special Issues that Face Distance Learning Students

There are other issues that may be typical only to the distance learning students when taking an online course. The distraction of the environment where their computers are located could be a major hurdle. If they do not have a computer or Internet connection at home, then finding a location with minimal distractions could be a challenge. Some students find studying at the office can be hard to do with deadlines and co-workers looming over them. The computer commons area or computer lab at the college can also have many disruptions from people and staff. Students all learn differently and having the optimum environment in which to conduct their distance learning experience could be essential to their success.

Individual learning preferences could be another issue that students must overcome in the distance learning environment. Some other problems that may arise are isolation from other learners, lack of verbal instruction and not being part of a learning community.

The advertising practices of some institutions soliciting their distance learning programs can also lead to the student dropout rate. Penn State once advertised that a degree was "just a click away". This may lure students into believing that distance learning is an easier road to travel, when in fact the rigor of many online courses requires more work than the traditional

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classrooms (Frankola, 2001). This added work could frustrate many distance learning students, and cause them to drop out of any method of higher education.

The technology itself poses a frustration for many students. Slow connections, loss of connection, incompatible browser software, software interfaces, and servers that go on the blink will continue to be major problems in the near future. Yet, in some strange way, this can serve to bond a group of students who are sharing the experiences (King, 2002).

Success in distance learning depends upon the student being self-motivated. There will be nobody breathing down a student's neck to tackle the content. The student must be a good reader and know their way around a computer (McGrath, 2005). This could be a problem for students with special needs or for those with a limited expose to computer technology.

There is still a *digital divide* between students of the 21st century and those who were educated in the 20th century. We must bridge the gap in order to step forward in the progress of the distance learning environment (Stumpf, McCrimon & Davis, 2005). There are many students and instructors who are intimated and frustrated by technology. Many are pulled kicking and screaming into the online classroom. This is a problem that must be addressed if distance learning is to become successful.

To be successful educational institutions need to take into consideration and understand students' expectations of distance learning courses.   Adult learners bring a different set of expectations to the forefront of education. They are looking for convenient access to classes, a partnership with community businesses, a customized curriculum to fit their specific needs, a flexible delivery method and the use of technology (Katz & Associates, 1999). These are much different expectations from the students who take classes in the traditional classroom.

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Student expectations from the distance learning classroom

What do students want from their distance learning courses? For most students their first response was college credit or a certificate.   Next, is a request for active correspondence with an online facilitator who has a virtual office with frequent hours. Full-time technical support was another issue. Finally, the ability to start a course at anytime was important to the students (Frankola, 2001).

A study was performed on distance learners to explore their satisfaction with distance learning environments. "Results indicated that learner satisfaction with the course structure, activities, assignments and instructor guidance and encouragement, led to greater satisfaction with perceived knowledge gained"(Stein, Wanstreet, Calvin, Overtoom, & Wheaton, 2005, p. 105). This statement indicates that students who have more interaction inside of the distance learning classroom come away from the experience with a higher degree of satisfaction.

Students in the future will make more demands on the educational systems. There are some of the areas where we may see the need for change to accommodate the students. A shift from faculty-centered to learner-centered institutions is one area that will need to be addressed with concern to the adult learner. Affordable cost for higher education is an issue that effects all students. Institutions that promote the idea of lifelong learning are critical to tapping a variety of students from different stages in life. Seamless learning environments will help the course to flow and be less of a frustration for students. Asynchronous (anyplace, anytime) learning is one of the major factors that draw students to distance learning. Interactive and collaborative learning, a plug-in and play approach to learning could be important in keeping students from dropping out of a distance learning course. Finally, serving a diverse population with diverse needs and goals will need to be the focus of distance learning if it is to become a successful

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method of delivery for higher education (Katz, R. & Associates, 1999). These are factors that distance learning can certainly help institutions achieve in the next decade.

One way that distance learning can achieve success is by taking students' expectations into account when designing distance learning classrooms. Instructional designers work with instructors at each development stage, working as a representative of content, the end user and the learning purpose. Designing a seamless course that challenges students with out frustrating them is a key element in the success of an instructionally designed classroom. In a well-designed training program or classroom, nothing is accidental, just like in a well-designed building (Troupin, 2000).

Instructional Design Classrooms

There are several factors that go into designing a distance learning classroom. Launching web courses require completely rethinking of the course. A new model needs to be created for this instructional environment. A faculty member who is ready to embark upon this new method of learning must be open to revising the structure of the course and reconsider their basic philosophy of education (Kidney & Puckett, 2003). The faculty of tomorrow may find it necessary to set aside their roles as teachers and instead become designers of learning experiences (Katz & Associates, 1999). The instructor becomes a guide on the side or a mentor in the middle, not only guiding students, but also acting as a cooperative and collaborative learner within the established community of learners (King, 2002).

When designing this new model for distance learning it might be helpful to look at some guidelines established by the Institute for Higher Education Policy. They formulated three recommendations for Internet-based distance learning. They are: proceed cautiously with a government publication on distance learning, strengthen the impact technology may have on

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equal educational opportunity, and government policy should be based on what works

√ (benchmarks). This agency created 24 benchmarks for the government to base its policy on in

regards to Web-based distance learning in higher education (Merisotis, 2001). These are some

recommendations for schools to take into consideration when creating distance learning courses.

When designing a course, the most important element to consider is interaction. David

Hawthorne, senior vice president of leaning environments for NUYonline agrees that a personal

the number of

connection is one of the most important factors that help to boost students' completing the

course (Frankola, 2002). The one reason that comes up again and again in most studies on

student dropout is the dehumanizing of education through the distance learning environment.

Jean McGrath, Director of Student Service for World Campus Distance Education, makes a good

point when she says, "You can have the best course out there, but if you don't have instructors

working with students, people will drop out," (Frankola, 2002, p. 55). Creating a classroom that

maximizes the opportunity for students to interact with the instructor and other students will help

the distance learner establish a connection with others, therefore putting a human touch in the

distance learning experience. This can be achieved through structured chats, threaded

discussions and student presentations involving peer reviews (Kidney & Puckett, 2003).

Literature has pointed to a pedagogy that has been very successful in conducting courses at a

distance. The key ingredient for success is for the learner to become a part of a collaborative

community of learners (King, 2002).

One creative distance learning instructor came upon a novel idea that may have assisted

the

in his completion rate for all of his distance courses. He helped his students to create a fully

collaborative community by adding a fictitious virtual student named Joe Bag O'Donuts (Joe

Bags). Everyone in the class knows Joe is a fake, but they treat him just like a normal student.

Through Joe the instructor motivates his students to discuss and bond with each other. Joe is the first one to have technical difficulties. He plays the role of learner and facilitator by making mistakes and guiding others. The instructor has found that the students are very responsive to Joe, and he adds a bit of fun and interest to the learning experience (King, 2002).

Often instructional designers and curriculum designers become overwhelmed with technology and forget to address these important issues: the characteristics and needs of the learner, the influence of media upon the instructional process, the equality of access to the delivery system, the role of the teacher and site facilitator (Sherry, 1996).

There are a few areas that instructional designers need to be aware of when designing a course. One is not to overwhelm the student with graphics that may not serve any purpose. This could lead to confusion and may have no instructional relevance to content. Next, give the student an opportunity to practice what they have learned somewhere in the process of teaching, discussions and testing. Lastly, it would be good to give some thought to maintenance of the site from semester to semester. Students will become frustrated trying to figure out an assignment schedule and have the dates from the last semester appear (Kidney & Puckett, 2003). Designing a course that is easy to navigate, understand and comprehend should be the ultimate goal of the instructional designer.

Educators must realize that distance learning is a delivery method that is much different from the traditional classroom environment. Courses that are taught in person cannot simply be transferred into the distance classroom. There are many more factors that come into play when teaching students in a distance learning environment. It might even be helpful to have a third party evaluate the distance learning course to make sure that it remains educational sound and

effective. These ideas could be the keys for reducing the dropout rate of distance learning students and assuring their success.

Summary

This research study wants to reveal that there is a relationship between instructionally design classrooms and the student dropout rate in distance learning courses. There have been many studies that have addressed the issue of student dropout rate both in traditional classrooms and in the distance learning environment. However, there have been no direct studies that have linked the design of the distance learning classroom and the dropout rate of students.

This study will take a look at student's expectations of the distance learning experience. Gaining this insight will allow the instructional designers to build a distance learning environment that takes these thoughts into consideration.

When designing a successful distance learning classroom, there are special issues that need to be explored. This study will uncover these needs so that instructional designers will have some ideas of what they need to do in order to create a distance learning environment where students will not dropout, but succeed in their pursuit of their educational career.

Distance learning is still a very new method of delivering an education to students. There are many questions that need to be answered in regards to what will make it a successful form of education in the future. Instructionally designed classrooms are just one piece of the puzzle that could help educators create a picture of success for their students. This study will help to reveal if instructional design does play a prominent role in keeping students from dropping out of distance learning courses.

Chapter 3

Methodology

The goal of this research study ~~will be~~ *has been* to explore if there is a relationship between the dropout rate of college students taking classes in a distance learning environment and the design of the distance learning classroom. It will also ask the students to share their perspective on their distance learning experiences. The researcher want*ed* to explore the positive and negative experiences that students *have had* ~~had~~ in the distance learning environment. This insight may p~~rovide~~ *be* useful *in* ~~for~~ designing classrooms so that there is a lower rate of dropout among college students in distance learning classrooms.

For this study the researcher ~~will be using~~ *used* a mixed method. A quantitative study will *was* be conducted for the collection of data about the dropout rate. This *was* will be done in two steps. First, data *was* will be collected concerning the number of students that have dropped out of each distance learning classroom included in the study. Next, those students will be mailed a survey asking specific questions about their distance learning experience. Then a qualitative method will be utilized to gather data about the expectations of students and the reasons they dropped out of the distance learning classroom. This will be accomplished by the use of personal telephone interviews.

This descriptive research study will utilize the causal comparative design to help explain the dropout rate of distance learning students and why they chose to dropout of this mode of learning.

The research questions and variables are listed below in Table 1:

Table 1
Research Questions and the Variables Being Studied

RESEARCH QUESTION	VARIABLE
What reasons do students give for dropping out of distance learning classes?	Survey on reasons for dropping out: time, finances, difficult, workload, etc.
What are some other issues that face students who journey into distance learning?	Survey on special issues that only distance learning students' would experience: frustration with technology, isolation, delivery method, etc.
What do students expect from a distance learning experience?	Survey on students' expectations: easy, convenient, time saving, etc.
Is the dropout rate lower in classrooms that have been instructional designed?	Statistics on the college dropout rate of two types of distance learning classrooms: instructionally designed and non-instructionally designed.

The research hypothesis of this study is that distance learning classrooms, which have been instructionally designed, will show a lower dropout rate. This study will also give instructional designers some insight into the reasons that students drop out of distance learning courses. This could be beneficial for the instructional design department on a couple of fronts. First, it would enable the designers to create better classrooms based on student responses. And, secondly, it would also show universities, college and other institutions how effective and advantageous it is to use instructional designers in developing a distance learning course.

Participant Procedure

Data will be collected from several distances learning classrooms during one semester at the Pima Community College in Tucson, Arizona. The Instructional Design staff will have designed half of the classrooms, while the staff will not have overseen the development of the other half of the classrooms. The dropout rate will be compared between these two variables.

The study will use an accessible population of college students who have enrolled in distance learning courses at Pima Community College. The sampling strategy used for this study will be the convenience sampling, because the people chosen will be those who are readily available for the study.

Data Collection and Handling Procedures

Twenty distance learning classrooms will be selected from within the WebCT at Pima Community College. Ten of these will be classrooms that have been instructionally designed and ten have not been instructionally designed. Data will be gathered from the college's computer database system (Banner) on dropout or withdrawals from each of the online classes. Once a student has dropped or withdrawn from the course, they will receive a survey in the mail asking them about their distance learning experience. A follow-up postcard will be sent out to students who don't response within a month. Students that return the surveys will be chosen at random for a follow-up telephone interview, asking more details about their distance learning experience. This telephone survey will begin approximately two months after the surveys have been mailed.

Instrumentation

There will be two-design procedures used in this study. This design procedure will be collecting data from two groups and comparing the cause and effect relationship of dropout rate relative to instructionally designed classrooms. Then a survey study will be conducted to explore reasons for the dropout rate among the students who have dropped out of both types of distance learning classrooms.

The researcher will use the knowledge and expertise of the instructional designer staff at Pima Community College to assist in overseeing the study to assure that the data will be valid

and reliable. The survey questions will be carefully and thoughtfully constructed during

meetings with the instructional design staff. Further meetings will be conducted to discuss the

survey question's truthfulness and consistency. A pilot test will be performed on a group of

faculty members that have participated in WebCT classrooms, both as students and teachers.

The Dean of Instruction and the team leader of the Instructional Design staff will have the final

review of the surveys before they are presented to the students.

An ordinal measure will be utilized to analyze the data gathered from the survey. This

will help assist the instructional designers in determining where the greatest weaknesses may lie

in the development of distance learning classrooms.

Data Analysis Procedure

Data will be analyzed by looking at the two different groups of students enrolled in the

classes (instructionally designed and non-instructionally designed). A one way NOVA will be

used to determine if the statistics are significant. The research wants to disprove the null

hypothesis that dropout rate is due to random chance. A t-test will be administered to help

determine the null hypothesis.

For the quantitative part of this study distribution and percentage methods will also be

used. The researcher will divide the number of dropouts by the total number of students in that

particular group. This will determine which group has the highest percentage of students

dropping out.

For the qualitative part of the study, a constant comparative method will be utilized to

analysis the data. The researcher will code the data to derive categories and then study the

categories through a second coding process to see if a pattern has developed in regard to why

students drop out of distance learning classrooms.

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Chapter 4

Expected Results

This study is designed to discover if there is a correlation between distance learning

classrooms that have been instructionally designed and the rate of student dropout. The study

will focus on several different questions to uncover if there is a relationship. The questions will

address some of the reason why students dropout of distance learning course and some of the

special issues that are typical only to the distance learner. More questions will ask about a

students' expectations of the distance learning environment. Finally, numbers will be analyzed

to see if more students dropout of classrooms that have not been instructionally designed.

The combination of this data will help to give educators insight about what it takes to

create a successful distance learning classroom. It will also help to determine if instructionally

designed classroom make a difference in the student dropout rate.

Conclusion

Instructional design of distance learning classroom is a relatively new discipline. There

are approximately 30 million pages of material on the Internet and this is growing by leaps and

bounds every day. The instructional designer sees all of this data as raw content. This volume of

information is staggering, but the amount that is in a learning format or that has been

instructionally designed is relatively small (Troupin, 2000).

Research needs to be conducted that will evaluate distance learning classrooms, students'

expectations and the reasons for failure or dropout rate among students who participate in

distance learning environments. This study takes a step in that direction by looking at some of

these important issues that face distance learning. If these problems are solved, then this method

of delivering education to students has the potential of becoming a phenomenal success.

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