

CHAPTER I

STUDY INTRODUCTION AND OVERVIEW

Students who do not successfully complete individual courses and entire degree programs have always posed special challenges for colleges and universities. Whether not participating to any extent in the online classroom or just completing partial course requirements, course dropouts continue to pose a source of concern for adult educators specializing in distance education course delivery. As online distance education courses become more mainstream and enrollments rise, dropout research in this area will require continued attention.

Kember (1990) refers to the “institutional wastage” caused by student dropouts. Pascarella and Terenzini (1980) write about the institution’s “wasted resources.” For this researcher, it is not just a question of institutional wastage, but more a question of wasted tuition and feelings of frustration and rejection on the part of adult students unable to complete their online courses for one reason or another.

Why do some students persist and some students drop out of an online class? Is it a case of poor motivation on the part of the dropout student? Is it the lack of institutional support? Is there insufficient interactivity in the online classroom to capture and hold a student’s attention? Are there different reasons for dropout in online classroom than in traditional face-to-face classes? This study uses logistic regression as a means of identifying variables that might determine persistence or dropout in an online classroom. These variables are defined as demographic, personal, institutional, and participative. The variables selected for inclusion in this study have been culled from dropout research focusing on correspondence and traditional face-to-face classroom environments and evaluated for their applicability within the online environment. The setting for this study is a mid-size university specializing in offering classes to working adults attending classes on a part-time basis.

Background of the Problem

The problem first came to the researcher's attention from conversations with faculty teaching in the online, computer-conferenced format. The faculty would relate with alarm and concern stories of how students would post an introductory note in the online conference and then not participate again for the remainder of the semester. Other faculty would question how they should cope with students who have never logged onto their online class but who have not formally withdrawn. In the fall 1997 semester, one instructor reported twenty-five percent of his enrolled students had not participated in the online class as of the sixth week of the course. For the summer 1998 semester, the average withdrawal rate for online classes offered at the institutions was 14 percent. What happened to these students?

Dropouts have always been a problem for colleges and universities (Woodley & Parlett, 1983; Rekkedall, 1982). The literature is rife with studies focusing on dropouts and the reasons students of various age groups drop out of or persist in traditional classes. Dropout and persistence rationale has been studied extensively in adult education programs, too. Numerous models (as described in the paragraphs that follow) have been developed to better analyze student retention and persistence for adults (Bean, 1982a; Morstain & Smart, 1974; Boshier, 1973; Pascarella & Terenzini, 1980; Tinto, 1982a).

The associated literature also chronicles the results of many studies measuring student participation, persistence, attrition and dropout rates in an effort to assist institutions and program developers overcome the dropout problem. These studies were conducted using a wide variety of delivery modes with a wide range of foci. For example, some studies (Pascarella and Terenzini, 1980) were concerned with persistence in the traditional classroom while other researchers, such as Boshier (1973), measured student

attrition in the classroom. Bean (1982a), and Morstain and Smart (1974), on the other hand, studied reasons for participation in adult education courses not associated in any way with the traditional classroom. Lagenback and Korhonen (1988) investigated persisters in non-traditional programs. While the terms used in the studies may be different, e.g., attrition, participation, persistence, achievement, completion rates, stop-out, all these studies measured what causes some students to persist and complete a course or program and other students to drop out.

The results of the studies identified in the preceding paragraphs yield a rich variety of outcomes – and raise questions about the generalizability and applicability of these studies’ results to research in the online environment where technology is introduced as the medium for content transfer and course interaction. For example, Pascarella and Terenzini (1980), studying freshmen undergraduate students, found that frequent student- faculty contact, especially informal contact, correlated highly with student persistence in the traditional classroom. Two questions regarding the generalizability of these research findings naturally arise for researchers studying adult student persistence and dropout in online classes.

While frequent student-faculty interaction proved to be a measure of student persistence with college freshmen, would this result hold true for adult students? Typically, students at the institution are on average 35.2 years of age, the majority of which have jobs outside of the home. Will adult students studying online regard student-faculty interaction in the same light as the college freshman in the Pascarella and Terenzini study when deciding to persist or to drop out?

The second question that arises with respect to the generalizability of the Pascarella and Terenzini study results is how to best define “student-faculty contact” in the online environment. In the Pascarella and Terenzini study, student-faculty interaction was defined by face-to-face-meetings. These meetings were both formal, i.e., in the

classroom and informal, outside the classroom. In online conferencing course delivery, there are no face-to-face meetings, either formal or informal during the course of the semester. As institutions enroll students worldwide into their online classes, the feasibility of face-to-face meetings is markedly slight.

The present study measures student-faculty interactivity, defining interaction as both private e-mail correspondence and public conference discussion. The courses used in this study are offered totally online with no chance of students and faculty ever meeting face-to-face. How relevant are Pascarella and Terenzini's findings for this study concerned with persistence in the online classroom? Because of the disparate environments in which the two studies were conducted, the response to this question would seem to be not very relevant or even generalizable at all. However, we cannot say for certain, which is why this study had to be conducted. Researchers must begin to study adult student persisters and dropouts in the online format.

The study was conducted at a mid-size university serving the working adult. Enrollments at the institution, especially in the distance education classes, have continued to climb by a steady eight percent each year since 1990. This increase in enrollments attests to the change in demographics as the working adult returns to the classroom. Connick states that "only 52 percent of college students are eighteen to twenty-one, and fewer than fifteen percent fit the profile of the residential student (Connick 1997, p. 8). There has been research focused on student dropout and persistence specifically in distance education courses. However, most of this research has been conducted using the correspondence mode of distance education, usually utilizing the Open University course model (Wong and Wong, 1979; Woodley and Parlett, 1983; Kember, 1989; Eisenberg and Dowsett, 1990; Sweet, 1986; and Kennedy and Powell, 1976). The volume of dropout research in this course delivery mode is to be expected given the maturity and size of the Open University. Here again, however, the applicability of the results of the studies to the online, computer-conferenced

environment is questionable. The interactivity afforded by conferencing technology adds a unique dimension to course delivery.

For example, as a result of his study, Kember (1989) developed a list of fifteen recommendations for preventing dropout in distance education classes. Three of the fifteen recommendations, in an effort to promote “collective affiliation,” suggest the use of local tutors with whom distance education students can meet on a periodic basis. The problem is that there are numerous institutions, such as the institution included in this study, which offer distance education courses that do not include face-to-face meetings. Students from all over the world participate in these classes and arranging for tutors is too unwieldy and cost-prohibitive. As a result, will these institutions experience higher dropout rates? Will these institutions be expected to hire local tutors for students worldwide to lower the dropout rate? Will online technology provide the requisite interaction so that no local tutors are required? How applicable are Kember’s recommendations for distance education offering courses based on computer conferencing?

Very little is known about the reasons for dropout or completion in online, computer-conferenced classes, probably because offering courses totally online is a relatively new concept. One author, Grint (1990), examined non-participation in computer-mediated conferences (CMC). However, his informal experiment only investigated the optional use of computer conferencing in a traditional Open University course. (The operative concept here is the *optional* use of computer conferencing.) In Grint’s study, students had the option of meeting face-to-face with tutors throughout the class period in addition to conferencing online. As a result of the optional use of CMC in Grint’s course and because of the Open University (OU) course structure, it is difficult to generalize the results of Grint’s informal study, especially with respect to semester-bound courses offered in a totally online environment.

What Grint found in his OU course was that asynchronous communication was perceived to be a drawback to student participation. Grint writes, “most interviewees regarded the absence of spontaneous and real time exchanges as a disadvantage” (p. 190). In addition, Grint found technology problems, judged to be user error rather than hardware or software failures, negatively impacted student participation in the conference. These findings would not seem to bode well for courses offered totally online. However, a question to be asked is did the optional use of technology in his course delivery lead students to rely on real time, face-to-face meetings and to foster negative views toward the technology used? Another question is how well trained was the faculty in the use of computer conferencing?

In this study, computer conferencing is not optional, but rather an integral part of the course delivery process. Conferencing is the prime method for student-faculty interaction. In this study, conferencing is not optional and there is never a chance for face-to-face meetings as part of course proceedings. Student-to-instructor as well as student-to-student interaction is conducted via either personal e-mail or public conference topic postings.

To date, to the author’s knowledge, there are no studies conducted dealing with participation rates in distance education courses offered totally online via computer-conferencing. As has been indicated, there are numerous studies focused on student participation and dropout in a wide variety of venues, from adult education programs to freshman classes, but not one study has focused on the adult learner in the online classroom. Gatz finds that “ Despite the evident need, there is a profound lack of research regarding attrition in American postsecondary correspondence and distance education.” (Gatz, p.3) As enrollments in computer-conferenced courses continue to grow, there might be a corresponding rise in number of course dropouts, making vital the research in this area.

As an example of continued growth in enrollments, every semester since online conferencing was introduced at the institution under study, enrollments in online, computer-conferencing courses have increased by at least 50% over the previous semester. Student enrollments for the spring 1998 semester are over twenty-four hundred for online, computer-conferenced classes, up from the 9 students who enrolled in the original online class in the fall 1993 semester. All predictions favor continuing increases in online course enrollments.

Preliminary research by the author has discovered many reasons for enrollment increases in online classes. The first reason is the convenience of the online format. Students neither have to drive their cars through heavy traffic, nor do they have to find a parking space at the end of a busy workday to participate in their class. Instead, students access their electronic classroom from the convenience of their home or office at a time conducive to maximizing their learning experience.

The second reason for increased enrollments is the response to job market preparation demands (Gatz, p. 5) The time frame in which job skills become obsolete is now every seven years and in the computer field, this “window” is even more compressed (Toffler, 1981). The need for additional retooling and job skills updating, in addition to just acquiring new skills, is making “lifelong learning” a constant in a society growing ever more dependent on technology (Naisbitt, 1982). Institutions view online, computer-conferenced courses as viable alternatives to traditional courses and as a means to respond to the increased demand for education.

The third reason for the increase in online course enrollments is that the format has become a preferred learning style for adult learners. In conversations with students enrolled in the distance education courses at the institution, the students related how much they appreciate the independent mode of learning. The theme that emerged from conversations with students registered in online courses is that they highly value being

able to take charge of their own learning process which includes determining the timing and the duration of their participation in the course conference. However, the independent mode of learning is not appropriate for all students. From many discussions with online faculty and through personal experience in teaching online classes, the author knows that some students appear to lose their way during the course of the semester. For example, some students complete some of their assignments, but do not take the final examination, or else they participate initially in the course conference, but never submit assignments nor take the final examination. The results of this study should assist institutions to determine which students may or may not be successful in the computer conferencing format.

As stated previously, there is very little research conducted to date on reasons for student attrition in online courses. Researchers in the distance education field like Starr Roxanne Hiltz (1986), focused their computer conferencing research on measuring student performance results between online and traditional classrooms. To date, no one has researched and published online student persistence rates and reasons for dropout in computer-conferenced classes, most probably because the computer conferencing format is so new. Shale (1982) has written “why students drop out of university distance education and what institutions might do to address the matter are two vitally important issues.” (p. 117). These tenets are equally true for online, computer-conferenced courses.

Problems with Dropout Studies

For all of the dropout research conducted to date, there is still much confusion and contradiction about causes for student dropout. In his writings, Tinto (1982b) refers to the “disarray” of dropout research. The major discrepancies and problems with dropout research identified during these research efforts are discussed in the following paragraphs.

One major shortcoming identified during research for the present study is the ambiguous definition of dropouts (Munro,1981; Tinto, 1982b). To be clear, dropouts for the present study's purpose include only those students who voluntarily drop out of classes, either having completed some of their assignments and participated to some degree in the online conference or else not participating in any way in the online class. In addition, this study also includes students who officially inform the institution they no longer want to continue studying. The proposed study is not concerned with students who are dismissed for academic reasons or who are prevented from course completion by the institution because of failure to meet policy requirements and standards.

An added problem with dropout research is the variety of program and course venues along with the various age groups used by researchers when conducting their studies. Some studies, such as Boshier's, (1985) center on adults and adult learning programs outside of university settings. Other studies are concerned with drop out rates at the Open University (Sweet, 1986; Wong and Wong, 1979), where it can take students two years to complete one course. Still other researchers, such as Pascarella and Terenzini (1980) conducted studies using traditionally aged college students. Comparing causes for student dropout and actual dropout rates across these studies is difficult. Each study has its own individual framework which influences study results, making generalization of results across studies difficult. The proposed study would be a resource for practitioners and other researchers interested in persistence and dropout for computer-conferenced courses offered to adult students in a semester-bound format.

Distance education course timeframes present another interesting challenge to researchers. Rekkedal (1982), for example, specifically measured dropout rate in distance education classes offered as open-ended correspondence classes. Rekkedal's study offers yet another different set of study parameters, making a comparison of results difficult with studies based upon semester-bound classes, such as the study by

Pascarella and Terenzini (1980). Further, Shale describes how an Athabasca University student is permitted 12 months to complete a 6-credit course (Shale, 1982). The institution at which this study was conducted, offers courses in a fifteen-week semester format for the fall and spring semester. The summer semester is offered during a 12-week timeframe. This study was conducted during the summer semester.

Even when completion rates are given for a study, researchers have to consider the admission policy of the institution before deciding whether or not the dropout figure is within an acceptable range. For example, the British Open University (OU) boasts a completion rate of approximately 70%. However, only 50% of those applying to the OU are admitted and only 75% of admitted students actually enter the OU. These enrollees serve as the calculation basis for the OU completion rates. Athabasca University, on the other hand, admits everyone who applies and uses these figures as a basis for their completion rate calculations. In order for the OU dropout figure to be comparable to Athabasca's dropout rate, the Open University would have to admit all applicants and use this figure as a basis for their dropout calculations (Shale, 1982). Meaningful comparisons of dropout and attrition rates between distance education courses at different institutions are difficult to make (Rekkedal, 1982), which probably explains why it is rare to find actual dropout rates published.

To date, much research has been conducted on the causes of dropout and reasons for persistence in distance education classes. There is scant evidence of research, however, focusing on reasons for dropouts in online, computer-conferenced classes. As enrollments for the online courses continue to increase, the need for research in this area also increases. This study builds on past research, distilling and refining the variables identified from previous dropout research conducted thus far. The distillation and refinement process focused on variable usage specific to a study conducted in an online computer-conferenced mode with adults as learners.

In addition to distilling past dropout research for potential variables, a new variable, conation, was identified for use in this study. One of the major hypothesis for student participation or dropout as measured in the present study is the student's level of striving, or conation, operationally defined for purposes of this study as goal orientation. Three variables were measured as indicators of goal orientation, i.e., each student's score in the main categories of acting, planning and reflecting. It was recognized that not everyone who succeeds in the online course would score high in the Goal Orientation Index because there are other reasons for student motivation. However, the Goal Orientation Index, as Cookson (1990b) writes has "yet to be tested in a distance education setting" (p. 115). He argues that the index could be a "valuable guide to distance educators" (p. 115). This concept of conation will be discussed in the next section.

Conation

Conation comes from the Latin verb *conari* meaning to strive. Conation determines how one strives toward a goal (Kolbe, 1990). Once an integral part of psychological research and discussion, conation fell out of favor with the rise of Behaviorism. During the last twenty years, there has been a renewed interest in the conative domain (Hilgard, 1980; Davis, 1996). The conative domain, according to Snow, is made up of motivation and volition and is associated with goal-directed action and the goal accomplishment style (Snow, 1989). Further, renewed interest of conative assessment in course delivery is increasing (Snow, 1989; Corno, 1993).

Atman defines conation as the intent to act, bringing volitional acts to completion (Atman, 1982). Why do some students complete projects and finish coursework more successfully than other individuals, even when they have a lower IQ? Students who achieve their goals may be more intrinsically motivated and exhibit more volitional control over their behavior (Atman, 1988; Davis, 1996). These students might have a

higher conative capacity. The present study measured each participant's conative capacity and developed a goal orientation index profile for each student, using Atman's Goal Orientation Index instrument and, in addition, correlated the conative variables to other course completion variables in the planned logistic regression.

Statement of the Problem

The research problem flows from the author's research efforts and experience managing online course delivery for a mid-size university, specializing in delivery of distance education courses to adult students. Faculty and administrative staff cannot conclusively explain student course nonparticipation in their online, computer-conferenced courses. Students register for a class and then either submit partial written assignments but do not participate in the conference and do not take their final examinations or just never participate in the online conference but take their final examination. In some instances, the students never participate in the online class to any extent. In any event, the students may or may not formally withdraw from the class. The research for this study will include instances in which students both simply drop out of the course, e.g., stop actively participating in their course and those in which they formally withdraw from the online class.

Currently, after the first week of class, instructors are counseled to send every non-participating student an electronic mail (e-mail) message requesting the student logon to the computer conference and introduce themselves to the virtual class. In their messages on the computer conference, the instructors also advise the students to contact them personally if the students have any reservations or concerns about the course structure or content, or if they have technical questions that need to be addressed.

Additionally, both the electronic mail addresses and telephone numbers for the Technical Help Desk personnel are included in the materials mailed to students within

twenty-four hours after registration. The telephone numbers and e-mail address are displayed prominently in the instructors' introductory letters and in the Technical Issues flyer enclosed in the student packet. If the students have any technical issues, they are provided with ample means for communicating those issues to the proper person(s).

Sometimes students respond to the instructor's e-mail message, but in some instances they do not. In some cases, faculty members attempt telephone communications with the non-participating students in their class. Telephoning all non-participating students is not official policy. Some instructors incur the expenses on their own. As not just this institution, but other institutions across the country attract more and more international students, the viability of faculty telephoning non-participating students will become prohibitive.

Until now, no one has investigated the cause of student non-participation in online classes, and at this time, there is no established policy in place for handling non-participating students at the institution included in the study. This study's outcome should generate data and knowledge for consideration when regarding dropouts not just at our institution, but at institutions just contemplating offering online courses.

Research Questions

There are three questions guiding this inquiry. These questions are: a) Is Goal Accomplishment Style, as measured by the Goal Orientation Index (GOI), related to persistence and dropout in an online, computer-conferenced class? b) Is there a relationship between other selected variables (Demographic, Personal, Institutional and Participative) and student persistence or dropout in an online, computer-conferenced class? c) Can a relationship between Goal Accomplishment Style and the other selected student variables be identified and related to persistence and dropout in an online, computer-conferenced class?

Significance of the Study

The research conducted for this work contributes to the literature in researching dropout and persistence rates in online, computer-conferenced classes. While enrollments in online courses are increasing significantly, ironically, there is little known about why students drop out of online classes. In addition, this study will contribute to the literature on adult learners. The proposed study should help build a foundation on which future research might be based.

Definition of Terms

The terms defined below are included because they clarify concepts upon which this study is based.

Attrition – The process of dropping out of a class. Student attrition could be through formal notification of withdrawal as well as no notification of course dropout.

Client-Server Technology - A communication configuration in which the client machine requests processing services and the server machine responds, supplying the requested services.

Computer-conferenced course – For purposes of this study this term is synonymous with online courses and the online environment, i.e., courses offered totally online via computer conferencing software. See definition of on-line course given below.

Conation - The act of will or striving.

Dropouts - Students who register for an online course and then either participate to some degree in the online course and then dropout or else never participate to any extent in their online course. Students who formally withdraw from college classes are also considered dropouts in this study. Throughout this study, “dropout” is used as a noun and “drop out” as a verb.

Goal Orientation – This term refers to the active and reflective steps of the Conation Cycle. The degree to which individuals know about, value, and perform the steps in the

Conation Cycle determine the extent to which they are goal oriented. Goal Orientation is calculated in accordance with point value for responses on each category of the Goal Orientation Index (GOI) (Atman, 1986). For purposes of this study, the scores will be grouped into three categories: acting, planning, and reflecting.

Online, computer-conferenced course – Course offered totally online via computer conferencing software. In online courses, all course communication, whether student to student or student to teacher is conducted electronically. In this study, students never meet in a face to face setting.

Persisters – Students who successfully complete the class and receive a grade of “D” or better. The term “persister” is synonymous and used interchangeably with “completer” throughout this study.

Stop-outs - For purposes of this study, stop-outs are synonymous with dropouts. Students who register for an online course and then either participate to some degree in the online course and then dropout or else never participate to any extent in their online course. Students who formally withdraw from college classes are also considered dropouts in this study.

Limitations of the Study

One limitation of this study may be the limited generalizability. Study participants are adult learners taking online, computer-conferenced classes at the specified institution. Results of this study may not be used to explain student non-participation in other distance education formats such as audio-conferencing or instructional television courses. While the study is format-specific, the research is important because of the increasing enrollments in online, computer-conferenced courses. Additionally, identifying student variables related to persistence in an online classroom, while important for the establishment of policies and procedures for the selected institution specifically, is also important for other institutions offering online, computer-conferenced courses. As stated previously, the number of institutions offering online

courses is growing steadily.

The students participating in this research have self-selected into the courses and have not been randomly determined. Such non-random selection should not pose a statistically significant problem as most students self-select into courses. The course specializations included in this study are representative of the fifty-two online courses offered at the institution and include a wide-range of topics from computer studies to communications, to behavioral studies and mathematics.

The research contains an uncontrolled for variable only mentioned here for completeness. The variable, the individual instructor's organizational and delivery approach, is not expected to have a major impact on this study's outcome as the individual instructor's organization of the online courses used in this research may or may not vary greatly. There is no way to determine faculty delivery variation impact for certain. However, before they were permitted to teach an online course, each instructor had to attend and participate in a six-week certification training session where participants met face-to-face for two and a half-days at the beginning, mid-point and at the end of the session. Before faculty were certified to teach in the online format, the instructors also had to meet minimum standard performance criteria, thus establishing a standard baseline from which to begin teaching online. While each faculty member is proficient and experienced in teaching online courses, each instructor has an individualistic approach to presenting online course content, as would be expected based on course topics. This individualistic approach should not impact study results.

Organization of the Study

Chapter I provides the study overview and background, explaining how the problem came to be identified and the need for the research. Chapter II presents a review of the

associated literature. Reviews of books and journal articles describing the nature of online computer-conferencing courses and a wide variety of persistence and dropout studies are also included in this chapter. Chapter III describes the method and design used to conduct the study, including data collection, data analysis, and instrumentation. An analysis of both the quantitative and qualitative data collected is presented in Chapter IV. Chapter V sets forth the study's recommendations and implications for future research.