

LOGGING OFF: ATTRITION IN ONLINE  
COMMUNITY COLLEGE COURSES

by

KRISTA M. LEBRUN

MARGARET L. RICE, COMMITTEE CHAIR  
TIMOTHY LEWIS  
VIVIAN H. WRIGHT  
ANGELA BENSON  
RICHARD L. RICE, JR.

A DISSERTATION

Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Educational Leadership,  
Policy, and Technology Studies  
in the Graduate School of  
The University of Alabama

TUSCALOOSA, ALABAMA

2012

Copyright Krista M. LeBrun 2012  
ALL RIGHTS RESERVED

## ABSTRACT

The purpose of this study was to investigate factors for student attrition from online community college courses. The demand for online and distance education opportunities is growing on a national level. The increase in online courses is a direct result of the type of individuals who select to learn virtually. Most online community college students tend to be older, working adults with families and who participate in activities in the community. In light of the significant growth in online learning, it is important to understand factors for student attrition.

A researcher-developed survey that combined information from a pilot study and a convergence of five retention theories was utilized for this study. An invitation to participate in the research was sent to community college students who had recently withdrawn from an online course at an eastern, central community college in Mississippi. Additional data were obtained for all students enrolled in an online course through the community colleges' student information system (SIS) database. The questions were divided into four categories including student demographics, online experience, LMS tools, and social interaction and were analyzed utilizing quantitative methods including descriptive statistics, frequency tables, and chi-square tests of independence. Qualitative data were gathered through an open-ended question on the survey and were sorted and analyzed through a coding process.

Results indicated an overall negative perception in regards to a sense of belonging in an online course prior to withdrawing. Online participants rated that they were dissatisfied or did not use several of the tools that are available within the LMS, indicating that further training

should be conducted for faculty teaching online courses. Additionally, online participants who participated in the survey acknowledged time management and lack of communication as primary factors for withdrawal from an online course. Given the current enrollment rate and predicted growth of online learning, further studies are warranted to better understand the factors that influence student attrition from online community college courses.

## DEDICATION

This dissertation is dedicated to my family. Thank you for your continued love and support throughout this process.

## LIST OF ABBREVIATIONS AND SYMBOLS

<i>df</i>	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
<i>M</i>	Mean: the sum of a set of measurements divided by the number of measurements in the set
<i>SD</i>	Standard deviation
<i>Sig.</i>	Significance
<	Less than
=	Equal to
$X^2$	Chi Square

## ACKNOWLEDGMENTS

There are many people to whom I am indebted and without them, this endeavor would not have been possible. First, I would like to thank my family who made me believe that I had the knowledge and strength to turn a GED into a Ph.D. They stood beside me every step of the way and would not allow me to quit by offering their support, encouragement, and confidence in my ability to see this through; even when I didn't have faith in myself. To my husband Patrick, I would not be where I am today without your love and support. You did more for me than words can say. I love you. To my beloved daughter Lorelei, I hope this guides you on your own educational journey. Remember Gandhi's words and learn as if you were to live forever.

To my friends and co-workers who offered their wisdom, support, and listened on good days and bad; I truly appreciate your friendship. I want to offer a very special thank you to Dr. Elizabeth Hohn for all the hours of sacrifice to help me wrap my mind around statistics. The time spent around your kitchen table was invaluable.

Last, but definitely not least, I want to thank my dissertation committee members, Dr. Timothy Lewis, Dr. Richard Rice, Dr. Vivian Wright, Dr. Angela Benson, and especially Dr. Margaret Rice who was not only my professor and committee chair, but my confidant and support during this lengthy process.

## CONTENTS

ABSTRACT .....	ii
DEDICATION .....	iv
LIST OF ABBREVIATIONS AND SYMBOLS .....	v
ACKNOWLEDGMENTS .....	vi
LIST OF TABLES .....	x
LIST OF FIGURES .....	xii
I INTRODUCTION TO THE STUDY .....	1
Introduction .....	1
Statement of the Problem .....	3
Statement of Purpose .....	5
Significance of the Problem .....	5
Theoretical Framework .....	8
Research Questions .....	9
Assumptions of the Study .....	10
Limitations of the Study .....	10
Definition of Terms .....	11
Summary .....	13
II REVIEW OF RELATED LITERATURE .....	14
Introduction .....	14
Retention Theory .....	15

The Evolution of Distance Education .....	19
The Community College and the Online Learner .....	22
Social Interaction in the Online Environment .....	24
Social Interaction and the Online Instructor .....	26
Forms of Social Interaction in an Online Learning Environment.....	28
Asynchronous and Synchronous.....	29
Multimedia in Online Learning .....	30
Summary.....	34
III METHODOLOGY .....	36
Introduction.....	36
Pilot Study.....	37
Setting .....	49
Participants.....	51
Instrumentation .....	52
Data Collection .....	53
Data Analysis .....	54
IV RESULTS .....	57
Introduction.....	57
Research Process.....	57
Demographic Data .....	58
Research Question 1 .....	59
Research Question 2 .....	64
Research Question 3 .....	66

Research Question 4 .....	67
Research Question 5 .....	70
Research Question 6 .....	72
Research Question 7 .....	73
Summary .....	76
V FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS.....	77
Introduction.....	77
Results, Conclusions, and Discussion.....	77
Implications.....	84
Limitations .....	86
Recommendations for Further Research.....	86
Summary .....	87
REFERENCES .....	89
APPENDICES	
A INFORMED CONSENT AND STUDENT QUESTIONNAIRE .....	97
B ADVERTISING MATERIALS SENT TO SURVEY RESPONDERS.....	107

## LIST OF TABLES

1	Demographics for All Students Enrolled in Online Courses Summer 2011 .....	38
2	Demographics for Students Withdrawn from Online Courses Summer 2011.....	39
3	Student Course Status by Gender Summer 2011 .....	40
4	Student Course Status by Ethnicity Summer 2011 .....	40
5	Marital Status of Surveyed Students Summer 2011 .....	41
6	Number of Minor Children in the Home Summer 2011 .....	42
7	Prior Experience in Online Courses Summer 2011 .....	42
8	Number of Online Courses Enrolled Into Prior to Summer 2011 .....	43
9	Course Withdrawals by Week Summer 2011 .....	45
10	Course Enrollment Activity by Withdrawn Students Summer 2011 .....	46
11	Student Level of Satisfaction with LMS Tools Summer 2011 .....	47
12	LMS Tools As Effective Means of Communication Summer 2011 .....	48
13	Student Engagement Prior to Withdrawal Summer 2011 .....	49
14	Demographics for All Students Enrolled in Online Courses Fall 2011 .....	59
15	Demographics for Students Withdrawn from Online Courses Fall 2011 .....	60
16	Chi-Square Test for Gender Fall 2011 .....	61
17	Chi-Square Test for Ethnicity Fall 2011 .....	61
18	Marital Status of Surveyed Students Fall 2011.....	62
19	College Enrollment Status of Surveyed Students Fall 2011 .....	63
20	Employment Status of Surveyed Students Fall 2011 .....	63

21	Number of Minor Children in the Home Fall 2011 .....	64
22	Prior Experience in Online Courses Fall 2011 .....	65
23	Number of Online Courses Enrolled Into Prior to Fall 2011 .....	65
24	Chi-Square Test for Prior Experience Fall 2011.....	66
25	Course Withdrawal by College Division Fall 2011 .....	67
26	Course Withdrawals by Week Fall 2011 .....	68
27	Course Enrollment Activity by Withdrawn Students Fall 2011 .....	69
28	Course Withdrawals by Course Enrollment Fall 2011 .....	70
29	Summarized Themes from Research Question 5.....	71
30	Student Level of Satisfaction with LMS Tools Fall 2011 .....	73
31	Rating of LMS Tools as Effective Means of Communication Fall 2011 .....	74
32	Social Interaction Fall 2011 .....	75
33	Summarized Subsets for Online Community College Attrition .....	85

## LIST OF FIGURES

1	Online course enrollment from Fall 1999 to Fall 2010.....	6
2	Online retention rates from Fall 1999 to Fall 2010.....	6
3	Online vs. traditional attrition rates from Fall 1999 to Fall 2010 .....	7
4	Retention theories in relation to online community college retention.....	8
5	Percentage of student withdrawal by college division.....	44

CHAPTER I  
INTRODUCTION TO THE STUDY

Introduction

While distance learning may seem like a relatively new phenomenon given the recent popularity of online learning (DLN, 2010), distance education has existed in some form or another since the 1800s. Originally, distance education was provided in the form of short lessons being delivered via mail. Eventually, the ability to relay knowledge more quickly came in the form of radio and televised distance education. However, accompanying the growth in Internet usage, today's distance education focus has dramatically shifted toward internet-based delivery. Currently, the Internet is being used more than any other continuing education delivery strategy (Howell, Williams, & Lindsay, 2003). More and more learners are requiring flexibility in program structure to accommodate their other responsibilities. Many people taking online courses are doing so because they have full-time jobs and/or have families (Porter, 2009). Online learning has provided students with families, jobs, and time conflicts the opportunity to obtain education anywhere and anytime via technology (Howell et al., 2003; Liu, Gomez, & Yen, 2009). The convenience that online learning provides has led to an increase in online course offerings. A survey by The Sloan Consortium, an online education group, estimated that in the 2009 academic year more than 5.6 million individuals took online courses (Allen & Seaman, 2010) and 96% of colleges and universities offered some form of distance learning (DLN, 2010).

In the year 2010, over one million new students logged into an online course, which brought the growth rate of online enrollment to over 21% (Allen & Seaman, 2010). However,

online learning suffers from student attrition issues more so than face-to-face programs. The 2010 Sloan-C report (Allen & Seaman, 2010) reemphasizes this point, which has been made by a chorus of researchers and reports (Snow, 2010). Those reports estimate online course attrition to be anywhere from 10% to 80% higher than attrition in traditional face-to-face courses (Ali & Leeds, 2009; Angelina, Williams, & Natvig, 2007; Martinez, 2003; Tinto, 2006; Yukselturk & Inan, 2006). Over the decades, several retention models have been developed to explain the factors that inhibit students from persisting in their educational courses. Spady (1970), Tinto (2006), and Bean (1980) each identified reasons why students might discontinue in courses. One such factor was socialization with the institution, including faculty members and classmates. However, these theories primarily focused on the traditional learner who attended a 4-year institution. Bean and Metzner (1985) expanded on the previous theories noting the gap in the research in regard to nontraditional learners. Their Conceptual Model of Nontraditional Undergraduate Student Attrition, which looked at older, part-time and commuter students, placed less emphasis on social interactions because non-traditional students tend to be older and enrolled in courses part-time, and placed a higher emphasis on outside institutional variables such as age, gender, ethnicity, motivation, and other environmental factors. While this theory is more fitting of the students who enter into community colleges, it does not take into account the online learner. Kember (1989) proposed the Longitudinal Model of Drop-Out from Distance Education as a means to bridge the gap on reasons for attrition between online and traditional learners. His model was influenced by previous theories, but focused solely on the online learner. Kember's model suggests that learners engaged in distance education are more likely to be mature adults with families than other students attending college. The situation of these mature learners introduces other factors, such as the learner's ability to "integrate the demands of

part-time off-campus study with family, work, and social commitments” (Kember, 1989, p. 294), circumstances that are far less common among college undergraduates. According to Kember (1989), family circumstances such as the number and age of dependents, housing conditions, and the pressures of responsibilities such as earning an income to support the family, can all have a significant impact on a distance learner’s decision to quit his or her course. Kember (1989) also identifies levels of income, gender, and geographic distance from the institution as contributing to attrition (Tyler-Smith, 2006). Since Kember’s model is over two decades old, it does not take into account the changing demographic characteristics of the current online learner. While the online learner does typically tend to be older with family and work obligations, 83% of undergraduate students were enrolled in online courses in 2009 (Allen & Seaman, 2010).

#### Statement of the Problem

The demand for online and distance education opportunities is growing on a national level. The increase in online courses is a direct result of the type of individuals who select to learn virtually. Most online students tend to be older, working, and involved with family and activities in the community (Howell et al., 2003; Palloff & Pratt, 2003; Smith, 2009; Tyler-Smith, 2006). Currently, 96% of traditional universities offer online courses (DLN, 2010), and over 5.6 million individuals were enrolled into online courses during the Fall of 2009 (Allen & Seaman, 2010). While the number of individuals who enroll into online courses is increasing, so is the number of students who withdraw. For many colleges, attrition and retention go hand in hand. Students who withdraw from online courses affect the overall retention rates.

Understanding online attrition and retention is a critical factor because online student retention has been suggested as one of the greatest weaknesses in online education (Herbert, 2006; Hill,

2000; Patterson, 2009). Several factors can contribute to the need to withdraw from an online course. In some situations, the very circumstances that draw students to online courses such as jobs and family obligations are what get in the way of a student's continuation (Palooff & Pratt, 2003).

Maintaining student enrollment is critical for all institutions, but some administrators place a higher emphasis on retention because retention rates can influence an institution's ranking in college guides and other mediums of popular press, with the implication that the higher the retention rate, the higher the quality of education (Derby, 2004). Additionally, retention rates are often taken into consideration when administrators are evaluating whether or not an instructor is providing a quality online educational experience that promotes student success. Understanding and maintaining retention rates is especially important for community colleges due to the fact that students traditionally enter into these institutions for the purpose of obtaining a 2-year transferable degree or a terminal certificate, enhancing job skills through workforce development, or for personal enrichment. Due to the fact that students may have various distinct goals for entering into a community college, tracking and studying retention becomes much more difficult than it would be in a 4-year university, where students' one primary goal is solidified around obtaining a bachelor's degree (Derby, 2004). Understanding the goals and needs of community college students, especially those enrolled in online courses, and how those needs and goals drive retention rates is paramount because there is a significantly lower retention rate among online courses versus traditional courses (Muller, 2008).

## Statement of Purpose

The purpose of this study was to determine factors for student withdrawal from online community college courses. The subjects in this study were the students who withdrew from online courses during the Fall of 2011 term. Course enrollment was monitored and students were surveyed to identify their demographic characteristics and to determine their reasons for withdrawing from the specific online course.

## Significance of the Problem

While the popularity of internet-based learning has risen since 1998 and much research has focused on the validity of distance and online learning, a number of gaps remain in regard to student attrition and factors for retention, especially at the community college level. In light of the significant growth of online learning and the high rate of attrition, it is important to understand factors for student retention in distance education or online learning. This is especially true for the college where the research took place. During the Fall of 2010, the eastern central Mississippi community college had an overall enrollment of 3,979 students. Of the total enrollment, 2,522 students were enrolled into at least one online course. Online course enrollment experienced during the Fall of 2010 was one of the highest the college had experienced in the last 10 years (Figure 1). The retention rate in the online courses was less than 60% (59.2%), which is comparable to online retention rates experienced over the last 10 years (Figure 2). Of the overall enrollment, 30% of the students withdrew from online courses, while only 13% of the students withdrew from traditional courses. The rate of attrition was one of the highest rates experienced in the last 10 years (Figure 3).

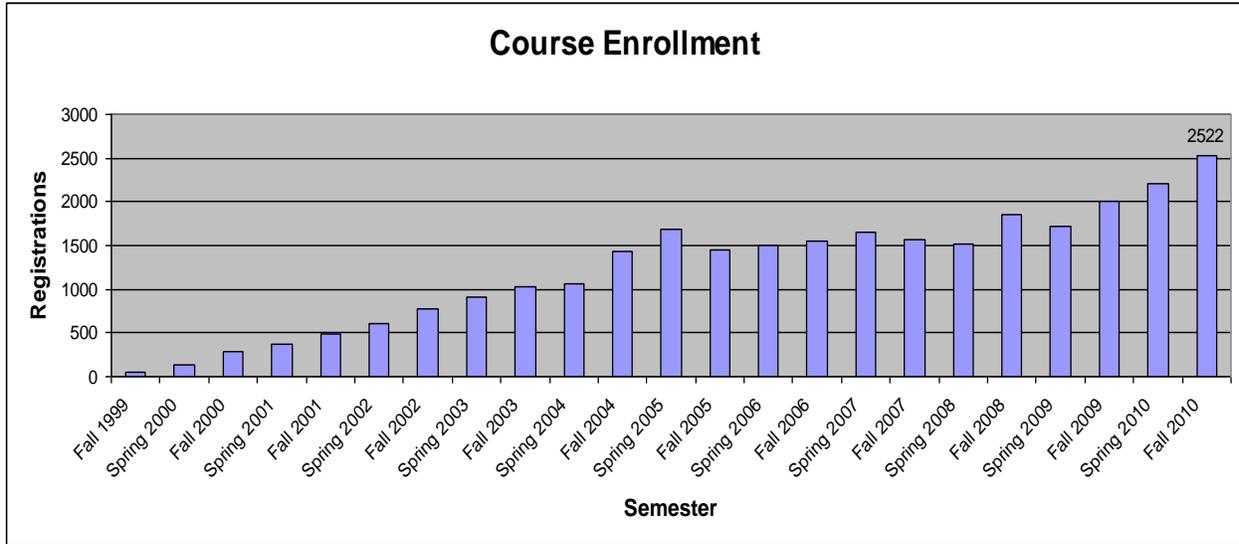


Figure 1. Online course enrollment from Fall 1999 to Fall 2010.

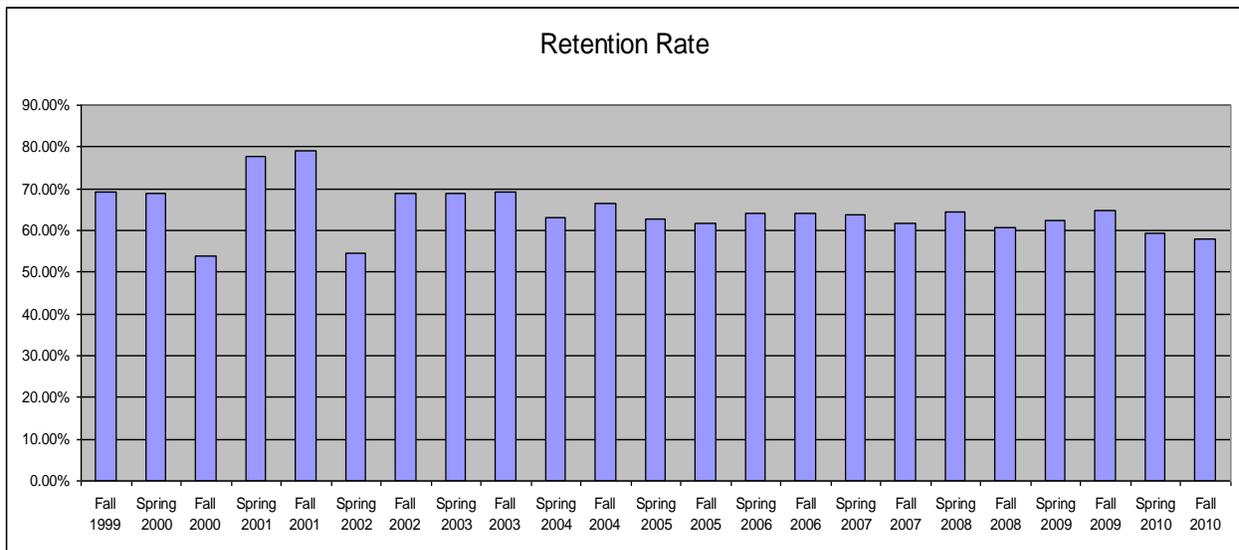


Figure 2. Online retention rates from Fall 1999 to Fall 2010.

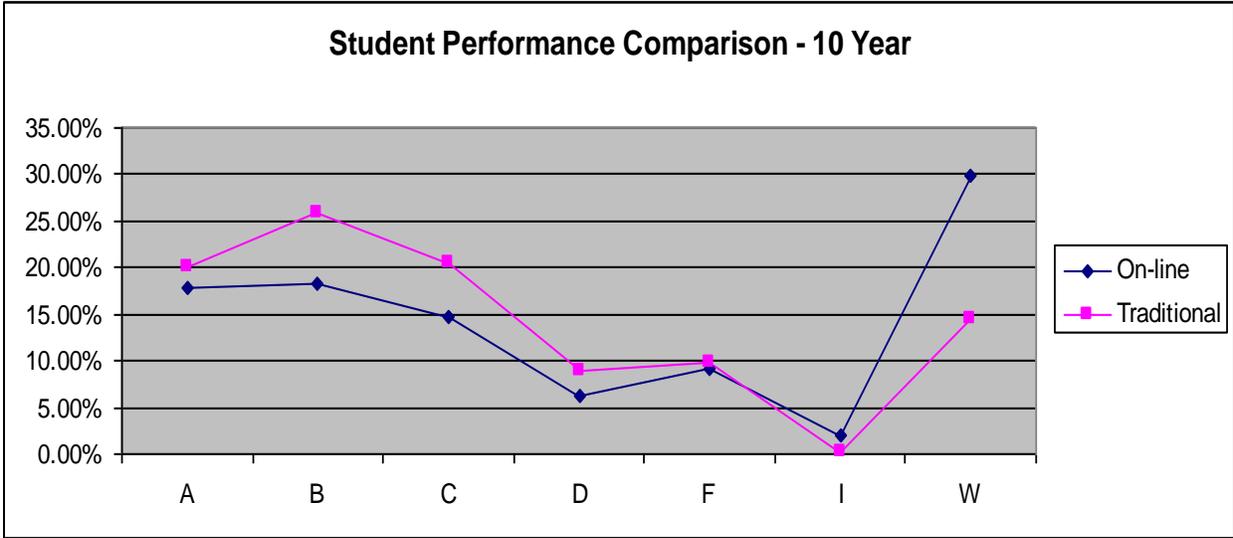


Figure 3. Online vs. traditional attrition rates from Fall 1999 to Fall 2010.

Even though the data show that students are withdrawing at a higher rate from online courses, some are still maintaining enrollment with the college through traditional courses. This study could have significant academic and practical applicability. Currently, many schools do not collect data on why students withdraw from online courses, including the college where the research will take place. This study could provide administrators with data that may be used in focusing retention efforts on the factors that prohibit students from persisting in online courses. Identifying the factors that affect student retention will result in the design of online courses that will better meet the needs of today's online learner. In turn, students and instructors will be assured a quality education regardless of location.

## Theoretical Framework

An institution’s ability to provide students with a quality education regardless of location is vital to the success of distance learning. The theoretical foundation of this study is based in part on existing theories of student retention and attrition. Research by Spady (1970), Tinto (1975, 1993), Bean (1980), Bean and Metzner (1985), and Kember (1989) identified factors for student attrition but these theories have focused primarily on (a) traditional learners at a 4-year institution, (b) nontraditional learners at a 4-year institution or community college, and (c) nontraditional online learners. These theories, while relevant, fail to take into account the demographic and environmental characteristics of today’s online learner.

	Spady	Tinto	Bean	Bean and Metzner	Kember
Demographics		X	X	X	X
Course Subject	X			X	
Previous Educational/Online Experience				X	X
Social Interaction	X	X	X		X

*Figure 4.* Retention theories in relation to online community college retention.

Figure 4 is a representation of the convergence of the five major retention theories in relation to the online community college learner. Four out of the five theories indicate that

student demographics such as age, race, gender, socioeconomic status, ethnicity, and enrollment status are defining factors as to whether or not a student completes his or her academic goals. Furthermore, emphasis is placed on social interaction or integration into the institution as having an impact on student persistence. Course subject or academic variables and previous educational experiences were also identified in two out of the five theories as an additional reason for student attrition.

Noting some gaps in each of these theories in relation to community college online learners and the lack of current online retention models, the researcher suggests a convergence model that combines major components such as student demographics, course subject, previous online experience, and social interaction, which are embedded within these theories.

### Research Questions

Seven research questions guided this study:

1. Is there a relationship between student characteristics and withdrawal from online community college courses?
2. Is there a relationship between previous experience with online college courses and withdrawal from online community college courses?
3. Do online community college students withdraw at a higher rate from specific courses?
4. Does the length of time enrolled in an online community college course decrease the likelihood of withdrawal?
5. What are the self-reported reasons for student non-completion of online community college courses?

6. What is the level of satisfaction by learners of the interactive LMS tools in the online course?

7. What is the perception of student engagement prior to withdrawing from an online community college course?

### Assumptions of the Study

The study was based on the following assumptions:

1. The participants were representative of community college students who participate in virtual learning.

2. The respondents were truthful and honest when completing the questionnaire.

3. The instructions for the data collection instrument adequately explained what was expected of each of the participants who completed the questionnaire.

4. The research instrument was designed to elicit appropriate responses and proved to be reliable and valid.

### Limitations of the Study

The study was based on the following limitations:

1. Data collection took place during the Fall of 2011. Therefore, the study findings are indicative of the time period of the study.

2. The data collection and intent of the study was limited to one 2-year community college.

3. The participants in the study were individuals who had withdrawn from one community college in a southern state. Therefore, the results cannot be generalized to all online community college students.

4. The participants in the study were selected based on withdrawing from the online community college course. Therefore, the study was limited to the number of students who withdrew and by the number of questionnaires returned.

### Definition of Terms

To provide a better understanding of the study and procedures utilized, the following terms are defined:

*Asynchronous learning:* Any learning event where social interaction is delayed over time. This allows learners to participate according to their schedule and be geographically separate from the instructor. It can be in the form of a correspondence course or e-learning. Social interaction can use various technologies like threaded discussion (Elearners, 2010).

*Attrition:* Reduction in a school's student population as a result of transfers or dropouts (education.com, 2011).

*Chat:* A website or server space on the Internet where live keyboard conversations (usually organized around a specific topic) with other people occur (Referenceanswers, 2010).

*Discussion board:* A discussion board is an asynchronous communication tool that allows one individual to post a comment or question about a specific topic in an internet-based course.

*Distance education:* Refers to the interactive, educational process between two people, student and teacher, separated by the physical distance (Isman & Dubaj, 2004).

*Distance Learning:* A system and a process that connects learners to distributed learning resources. Distance learning can take a variety of forms, all distance learning, however, is characterized by (a) separation/distance of place and/or time between instructor and learner, among learners, and/or between learners and learning resources; and (b) social interaction between the learner and the instructor, among learners and/or between learners and learning resources conducted through one or more media (LWF, 1999).

*E-Learning:* the acquisition of knowledge and skill using electronic technologies such as computer- and Internet-based courseware and local and wide area networks (MSN Encarta, 2009).

*Face-to-face:* Student and instructor are at the same place at the same time (Cadieux, 2005).

*Facilitator:* One that helps to bring about an outcome (as learning, productivity, or communication) by providing indirect or unobtrusive assistance, guidance, or supervision (Merriam-Webster, 2010).

*Instructor:* A college or university employee of professional rank (Merriam-Webster, 2010).

*Internet-based or enhanced instruction:* Classes that are delivered utilizing primarily electronic mail and/ or web pages (Cadieux, 2005).

*Learning management system:* A learning management system (LMS) is a software application or web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. A learning

management system may also provide students with the ability to use interactive features such as threaded discussions, video conferencing, and discussion forums (TechTarget, 2010).

*Online learning:* Education that occurs online via computer (Fastfind, 2004).

*Retention:* Staying in school for an extended period of time or until the completion of a degree.

*Synchronous learning:* Learning that involves people being online at the same time and communicating with each other without a time delay (Fastfind, 2004).

*Threaded discussions:* An Internet discussion format where one individual posts a comment related to a specific topic and other members can respond to the comment. The originator of the comment can respond to all the posts, which initiates a chain of correspondence. Responses are always displayed so one may follow the tone of the conversation (Cadieux, 2005).

## Summary

Learning at a distance is not a new phenomenon, although the means by which knowledge is transferred is now no longer limited by location or time. This study is organized into five distinct chapters. Chapter I includes an introduction, statement of the problem, statement of purpose, significance of the problem, research questions, theoretical framework, assumptions, limitations, and definition of terms. Chapter II provides a comprehensive review of the literature related to distance education, retention theories, the community college, the online learner, and social interaction in the online environment. Chapter III provides a description of the methodology that was employed to conduct the study. Chapter IV discusses the findings from the analysis and an interpretation of the data collected. A summary of these findings along with conclusions and recommendations for future research will compose Chapter V.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### Introduction

Distance education is an educational program in which students and the instructor are separated by location and time. Currently, it is one of the fastest growing forms of instruction worldwide with an enrollment growth rate of 21% (Allen & Seaman, 2010). Distance learning is not a new concept; rather, it is a form of learning that has evolved with the technologies available at the time. What once started as mailed correspondence has now evolved into a billion dollar industry. Community colleges serve students with life and time conflicts and students with multiple jobs and responsibilities. These unique features make community colleges a setting in which online courses can flourish (Liu et al., 2009). Unfortunately, research suggests that online course retention rates are low and existing research does not provide a well-developed understanding of the unique characteristics of students who are unable to persist in online courses, especially at the community college level (Corbeil, 2003; Liu et al., 2009; Summers, 2003). Community colleges face problems due to the lack of information on online student retention. Without this information, they cannot effectively support online students without knowing specific characteristics that lead to the success or failure in online education (Muse, 2003). Because attrition rates are typically estimated to be 20-50% higher than those of traditional courses (Diaz, 2009), it is important to understand the factors that contribute to student withdrawal from online community college courses. Therefore, this chapter addresses

four key aspects: (a) retention, (b) evolution of distance education, (c) community college and the online learner, and (e) social interaction.

### Retention Theory

In order to find effective solutions, problems must first be framed in a way that is understandable. Retention of adult students in online programs is a persistent and perplexing problem for providers of adult education (Nitsch, 2003). This problem is further compounded for community colleges, which typically have lower retention rates than 4-year colleges and universities due to the demographic characteristics and educational purposes of students who enroll. Retention in its basic form can mean the act of retaining something or to be retained. In education, the more common approach to retention is the ability to keep a student enrolled in a specific class through to completion (Coates, 2005; McGivney, 2004; Simpson, 2004; Truluck, 2007). Theories that have been listed and discussed among experts in the field of education are important to understanding how best to study the area of retention (Creswell, 2003). Student retention has been studied for decades with a variety of research and conclusions made on factors that influence student retention and success. However, literature of the existing retention models in higher education is largely focused on traditional campus-based learners (Shanley, 2009). In the 1970s there was a more sustained effort to formulate theories across the educational spectrum (Alexander, Kohnke, & Naginey, n.d.). One of the first known theoretical models of student attrition was developed by Spady (1970) with his publication of the article, "Dropouts from Higher Education: An Interdisciplinary Review and Synthesis." Spady proposed a sociological model of the dropout process. Looking at the family background of students, Spady put forth five variables--(a) academic potential, (b) normative congruence, (c) grade performance, (d)

intellectual development, and (e) friendship support--that contribute directly to social integration. Spady felt that social integration was a key to retention (Rasmussen, 2007). Spady drew similarities between students dropping out of college and suicide. He theorized that an individual makes a choice to leave a social system. Durkheim (1953) theorized that suicide was a choice to withdraw from society. Spady took this theory and applied it to higher education student dropouts (Spady, 1970; Steinmetz, 2009). One of the most often cited retention models is that of Tinto (1975). Tinto expanded on Spady's model and adapted it by separating the academic and social variables into two distinct yet interacting systems. Tinto's theory primarily focused on the academic and social integration of the student. Tinto (1975, 1993) believed that while individual attributes such as age, race, gender, academic ability, and socioeconomic status existed and impacted retention, he theorized that institutional fit and integration into the institution were most important when it came to retaining students.

John Bean is another retention theorist whose work has been widely accepted. Bean's Model of Student Departure predicts persistence based on behavioral intention (Bean, 1980). Bean's theory states that factors external to the institution can play a major role in affecting student attitudes and intentions and, subsequently, their decision to persist (Bean, 1980). Bean's theory includes five areas that impact student retention: (a) the routinization of student life, (b) the effectiveness of communication from the institution to the student, (c) the student's participation in classroom discussion, (d) student integration within the institution, and (e) rewards being consistent with the amount of effort expended. His model integrated earlier models such as Spady (1970) and Tinto (1975) and expanded upon them to include several new areas such as academic variables, student goals, and expectations (Steinmetz, 2009). Bean's (1980) model stated,

The background characteristics of students must be taken into account in order to understand their interactions within the environment of the IHE [institutions of higher education]. . . . The student interacts with the institution, perceiving 6 objective measures, such as grade point average or belonging to campus organizations, as well as subjective measures, such as the practical value of the education and the quality of the institution. These variables are in turn expected to influence the degree to which the student is satisfied with the IHE. The level of satisfaction is expected to increase the level of institutional commitment. Institutional commitment is seen as leading to a degree in the likelihood that a student will drop out of school. (pp. 158-160)

Bean and Metzner (1985) expanded on previous theories as there appeared to be gaps in the retention models. The previous models focused primarily on 4-year institutions, students who were considered traditional learners or individuals entering college directly out of high-school, and who did not have the constraints of family and work obligations. For adult learners, environmental variables may provide a more substantial reason as to why an adult learner cannot persist in college courses. The Bean and Metzner (1985) Conceptual Model of Nontraditional Undergraduate Student Attrition focused specifically on the adult learner and took into consideration the major role that environmental or external variables may have on student persistence. The Bean and Metzner model proposes that there are four sets of variables affecting dropout: (a) academic performance measured in terms of past and present GPA; (b) intent that is influenced by psychological outcomes and academic variables; (c) defining variables such as age, enrollment status, and resident status as well as background variables such as educational goals, high school performance, ethnicity and gender; and (d) environmental variables (Andres & Carpenter, 1997). While the Bean and Metzner model is more fitting of the demographic characteristics of students who enter in community college courses, it does not fully identify the reasons for student withdrawal from online courses.

Kember (1989) proposed a Longitudinal-Process Model of Drop-Out from Distance Education. Kember developed this model out of necessity since previously identified retention

theories primarily focused on institutions where students were full-time, traditional learners. Kember's model focused specifically on the distance education learner even though it is patterned from Tinto's (1975, 1987) previous models. Kember's model indicated a complex interaction of family context and background, personal motivation, abilities and depth of commitment to completion; previous educational experiences and achievement; and institutional support (Kember, 1989). Additionally, this model suggested that learners engaged in distance education were more likely to be mature adults with families than traditional students attending college. The situation of these mature learners introduces other factors, such as the learner's ability to "integrate the demands of part-time off-campus study with family, work, and social commitments" (Kember, 1989, p. 294), circumstances that are far less common among college undergraduates (Tyler-Smith, 2006).

The varied results of the studies identifying factors influencing retention rates imply that there is no simple solution to the issue of retaining students and helping them reach fulfillment of their educational goals (Shanley, 2009). While each of these models holds relevance in relation to understanding student retention and attrition, not one of them specifies the factors for student withdrawal from online community college courses. Based on a convergence of these models it may be concluded that reasons for student attrition in online community college courses is the result of (a) the demographic characteristics of the online learner such as age, race, and gender; (b) lack of social interaction because online students do not develop the onsite relationships that Spady (1970), Tinto (1975 1987), and Bean (1980) recognized as a vital factor for student persistence; or (c) environmental factors such a family commitments, work obligations, socioeconomic status, or lack of time. The unknown reasons for student attrition from online community college courses exist because early models of retention specifically focused on

4-year institutions, which primarily consist of traditional, on-campus learners. Bean and Metzner (1985) expanded on early theories to include nontraditional learners but they still left a gap in regard to distance education. Kember (1989) realized that the gap existed and formulated a model to explain attrition in online courses but it lacks the demographics and environmental variables that pertain to today's online learner.

### The Evolution of Distance Education

Distance education or online learning may currently be viewed as innovative, but it actually dates back to the early 1800s (Hinkle, 2009). Distance education has always been, to a great degree, determined by the technologies of the day. This is necessitated given the basic requirement of distance education to be mediated-using some type of technology to span the distance between students, teachers, and institutions (Anderson, 2009). Long before the computer was invented, the Internet was developed, or the first online course appeared, Isaac Pittman delivered the first distance education course by mail in the form of shorthand (Baker's Guide LLC, 2010). This form of learning was born out of a need for educational opportunities to reach a geographically dispersed population (Hinkle, 2009). It allowed individuals who might otherwise not be able to attend a traditional college a means to an education. The people who benefited most were individuals with disabilities, women who were denied admission to men-only institutes, and individuals who lived in areas where colleges did not exist (Hinkle, 2009). Eventually correspondence courses evolved into full degree programs, when in 1883, New York State authorized Chautauqua Institute to award degrees by correspondence (Baker's Guide LLC, 2010). Using what was learned at Chautauqua Institute, the University of Chicago became the first university to implement distance learning in the form of correspondence courses in 1892

(Maeroff, 2003). By 1930, correspondence courses were offered at 39 colleges and universities in the United States (Hinkle, 2009). With the invention of the radio, new forms of learning emerged. In 1921, Latter Day Saints University adopted the first educational radio license (Maeroff, 2003). Even though more than 200 broadcasting licenses were issued to school boards, colleges, and universities over the next two decades, radio learning failed to become popular as it did not attract large audiences (Hinkle, 2009). The 1940s saw great interest in television by educators but little action, and by 1948 only five U.S. educational institutions were involved in television with Iowa State being the first on the air (Jeffries, n.d.). By the late 1960s, British Open University established an innovative degree-granting program that utilized television and correspondence courses (Hinkle, 2009). This form of learning served as the model for the United States when in 1971, Coastline Community College began broadcasting classes by public television and, because it had no physical campus, became the first virtual college in the United States (Hinkle, 2009). Providing distance learning served the main purpose of the community college, which was to make higher education more accessible to those who were unable to attend traditional campus-based programs.

Further advancements in distance learning took shape when, in 1971, Marcian Ted Hoff invented the microprocessor (Hughes, 2004). The invention of the microprocessor allowed for the design and introduction of computers. In 1983, after Steve Jobs and Steve Wozniak introduced the Apple II, *Time* magazine named the computer “Machine of the Year” (Hughes, 2004). Not long after the introduction of the computer came the World Wide Web. While the Internet and e-mail were available in earlier decades for the Department of Defense and other businesses (Chandler, 2000), the World Wide Web did not come into existence until 1991 (Fischetti, 2009). With the creation of the Internet and the World Wide Web has come the ability

to educate beyond the constraints of time and location. This model of distance learning, often referred to as e-learning or online learning, is now mainstream learning (Anderson, 2009). In 2010, an estimated 96% of educational institutions had adopted the form of anytime, anywhere learning (DLN, 2010) with a substantial growth rate of almost 21% (Allen &, Seaman, 2010). Allen and Seaman (2010) reported in the most recent Sloan Consortium survey that 5.6 million students in the United States took distance education courses delivered online in 2009, and that 30% of all postsecondary students were taking at least one online course. The accelerated growth of online distance learning can be attributed to the technologies available. Most institutions offer online courses through the use of a learning management system (LMS). An LMS is defined as a software application or Web-based technology used to plan, implement, and assess a specific learning process (TechTarget, 2010). Common LMS in higher education include Blackboard, WebCT, Desire2Learn, and eCollege. Additionally, these systems share the following characteristics:

- Course calendar
- Student messaging and notification
- E-mail
- Assessment and testing
- Grading of coursework
- Class roster
- Web-based delivery
- Generation of reports
- Management of users, roles, courses, and instructors. (Martin, 2008)

Regardless of the LMS chosen, technology has provided students with the means to learn anywhere and at any time. As time has shown, the methods in which students learn at a distance evolve with the technologies available and the institutions that offer them. The evolution of distance learning is ongoing in an effort to meet the learning demands of the students who enroll in online distance education courses.

### The Community College and the Online Learner

The American Association of Community Colleges (2011) reports that community colleges serve close to half of the undergraduate students in the United States. Several variables have been identified as reasons why students enroll in community colleges. These variables include age, because community colleges enroll large numbers of adult and returning students; ethnicity, because the community college is the primary entry point to higher education for minorities; enrollment in developmental education, because a high proportion of students entering through the open door are not college ready; and the number of hours for which students enroll, because nearly two thirds of community college students attend on a part-time basis (Fike & Fike, 2008). Due to the students they serve, community colleges have different missions than their older, more established 4-year institutions; however, they are not unlike baccalaureate institutions in their first 2 years of education. Students may be enrolled in what are considered to be core or basic courses and will then transfer them to a university to complete a baccalaureate degree. However, not every student who attends a community college does so with the intention of attaining an associate's degree or for the purpose of university transfer. Students also enroll into community colleges for vocational or technical training, occupational or workforce development, or to simply take non-credit-hour continuing studies courses.

Adults who aspire to upgrade their educational credentials and job skills, but do not have the time to attend a traditional on-campus classroom, are consistently participating in distance education offerings (Dalziel, 2003). More than 90% of 2-year institutions have expanded their educational programs to include distance education, believing that these offerings are critical to the fulfillment of their mission of providing education to nontraditional students (Allen & Seaman, 2007). Distance learning in mainstream education has afforded adult learners to complete courses without physically attending a campus or having to leave their jobs and families. Adult learners do not fit the customary description of the “traditional” college student who is a recent high school graduate, 18-22 years of age, not yet employed, nor having family obligations (Moskal, Dziuban, & Hartman, 2010). Adult learners in the community college setting are typically Black or Hispanic, lower income, working adults over the age of 29 years old (NCES, 2009). Yet, age may help an online learner. Shanley (2009) reported that older students typically do better in e-learning courses. This is often tied to maturity levels and degrees of motivation for adult learners. Students who are older are often juggling careers and family and see completing the course as essential in reaching their educational goal. Li and Irby (2008) profile online learners as “busy working people, often on shift who want to advance their career, frequent travelers, those who physically find it difficult to attend college and parents who want to or have to spend more time at home with their children” (p. 451). These demographic and environmental variables are often factors that restrict nontraditional students’ participation in higher education to part-time study. The diversity of adults with economic, social, educational engagement, and personal circumstances, results in patterns of student participation that are often considerably different from those of younger students (McGivney, 2004). Unfortunately this is contradicted by research that has found the correlation between older students and course

withdrawals where career and family demands on an adult's schedule are more likely to interfere with their education (Menager-Beely, 2001; Shanley, 2009). Many departure models consider these external variables associated with nontraditional learners as contributors to drop-out that cannot be controlled (Bean, 1980; Bean & Metzner, 1985; Kember, 1989). At the same time, community colleges are not only providing access for adult students but also serving an increasing number of traditional age and high school students who take specific courses to get ahead in their studies. In fact, half of the students who receive a baccalaureate degree attend community college in the course of their undergraduate studies (AACCC, 2011). These students would be considered traditional learners; therefore, variables for attrition may differ from those of a nontraditional online learner.

### Social Interaction in the Online Environment

While retention models identify external variables that cannot be controlled, acknowledgment must be made of the fact that online learning is not the appropriate learning method for all students. This lies in the fact that online education often requires students to take on greater responsibility for their own learning. Students must log into the online classroom as a solitary initiative (Knowles & Kerkman, 2007) and then actively participate throughout the duration of the course. Students who are considered to be most successful in online courses often hold attributes such as intrinsic motivation, persistence, and self-confidence (Mandernach, 2009). Students' possession of motivational orientation (intrinsic or extrinsic) has significant effects on the students' learning performance as it has been found to be associated with a lower dropout rate, higher-quality learning, better learning strategies, and greater enjoyment of school (Hunga et al., 2010). Often, motivation can be found in the social presence of fellow classmates (Nagel,

Blignaut, & Cronje, 2009) and the instructor. Social interaction is a term that can carry several meanings. Roblyer and Wiencke (2003) refer to social interaction as the “complex interplay of social, instructional, and technological variables” (p. 1). It is the interpersonal and group communication among students within a particular class (Baker, 1999). For others, social interaction is the communication between or joint activity involving two or more people (Social interaction, 2009). Social interaction, the communication and interactions that take place between the learners and between the learner and the instructor, is at the heart of the learning experience and is one of the defining characteristics of successful learning in both traditional and online learning environments (Baker, 2010). Woods (2002) stated that both quality and quantity of student social interaction with the instructor and peers is much more crucial to the success of online courses and student satisfaction than to success and satisfaction in traditional courses. Furthermore, Gaillie (2005) reported that increased social interaction had significant effects on student retention by arguing that if student attrition is attributable to a lack of dialogue, then increased social presence would improve retention and overall grades.

Social relationships, especially online, are important for learning to occur (Hayden & Fagan, 1995; Kreigns, Kirschner, & Jochems, 2003). Traditionally, learners seek and construct knowledge through social interaction and dialogue (Brindley et al., 2009). Students may consider the lack of face-to-face contact as a major barrier in online courses (Hill & Raven, 2000); therefore, active participation ensures the successful completion of a course (Nagel et al., 2009). It is common for students who have never taken online courses to enter feeling that they will be alone in their online course, isolated from social activity and involvement with their classmates, and that computer learning cannot duplicate the community of the classroom (Cadieux, 2002). “I thought I’d feel alone, but instead, I feel a part of something different. I guess I feel connected to

the people in this learning community. The people are what keep me going” (Lee et al., 2004, p. 556). Members are able to communicate through the exchange of experiences, ideas, and prior knowledge (Lee et al., 2004). Most online learner social interaction will evolve from participation in the discussion board (Bowman & Green, 2001). Wall (2005) suggested that discussion board postings help to enhance students’ overall course experience because students who may be shy or less assertive in a traditional classroom may find comfort in communicating online through the discussion board. In a study by Shin and Lee (2009), one student noted, “I am not very assertive and would probably not have communicated with the class and teacher as much as I did online” (p. 33). Asking questions through the discussion board or via e-mail is a way to go deeper into the subject therefore making the matter more understandable (Hunga, Choua, Chena, & Own, 2010) while still providing online students with the benefit of idea exchange and a sense of belonging to the course.

### Social Interaction and the Online Instructor

Faculty members who are or will be teaching online courses are faced with new issues when it comes to teaching virtually. Not only must they be disseminators of knowledge but they must now design online courses. To effectively do so, faculty must learn the technology to create online courses and communicate and distribute information to students. Online instructors should be trained in online instruction and possess a real desire to teach online if they are going to do so (Moffett,2004) because the most successful online courses are those in which instructor-to-student social interaction is both frequent and productive (Blau & Gorsky, 2009). Additionally, the instructor’s desire to produce quality and interactive online courses will be evident to the students. Students should complete an online course feeling as though they have received the

same personalized learning approaches as they would in a traditional face-to-face course. Providing this type of personalization will often require the instructor to provide more support (Stone & Chapman, 2006) and devote more time to the learning process than in face-to-face or traditional instruction. Developing an online course to provide students with personalized and engaged learning takes effort and should not be entered into lightly.

It is common place for many online instructors to develop and design their own online courses. The design of an online course is a critical element in determining the quantity, quality, and type of interactivity within a course (Brindley et al., 2009). Because the instructor is commonly the designer and facilitator of the subject being taught, he or she must not only be up to date in the subject matter (Moffett, 2004) but must also develop the skill of creating social interaction within the online learning environment. Creating opportunities for social interaction is critical as social interaction does not just happen, but rather it must be designed into the course (Kreigns et al., 2003) through instruction and modeling. Most commonly, this is accomplished by the instructor becoming a willing and frequent participant in the online learning environment. Due to the fact that online learning is new to most students, the instructor can assist the learner in developing new communication strategies that will allow them to feel comfortable in online learning. This occurs by the instructor providing guidelines for online activities such as assignments, e-mail etiquette, and posting to the discussion board (Bowman, 2001). To build a thriving, diverse, and inclusive online learning environment, the instructor must promote social interaction from the start of the course. Instructors can have students introduce themselves through the discussion board. This social transaction among participants will allow members to see themselves as legitimate members of the online learning community (Lee et al., 2004). Instructors who establish collaborative and cohesive learning environments also better prepare

their students for life after college, such as the world of work. Much like a typical work environment, a collaborative learning environment allows members to share knowledge (Brindley et al., 2009), foster creative thinking, and generate new ideas and strategies all while working toward a common goal (Erlin et al., 2008). Creating opportunities for social interaction helps students establish a sense of community, build skills for the future, and develop an overall satisfaction with their online learning.

### Forms of Social Interaction in an Online Learning Environment

In distance learning, the geographic physical isolation, structure of the course, class size, and feedback can influence social interaction (Jung, Choi, Lim, & Leem, 2002). These various aspects require instructors and students to learn new communication strategies (Bowman, 2001) that differ from those found in traditional face-to-face courses. In a typical online course, a student will interact with the instructor and with fellow classmates. Social interaction in a virtual course can be accomplished through the use of learning and communication tools that are available within the learning management system. Research cites Moore's transactional distance theory as an explanation for why the use of electronic communication tools may encourage social interaction among learners and the instructor in an online environment (Baker, 2010; Chen & Willits, 1998; Gorsky & Caspi, 2005). The theory states that geographical separation does not impact the quality of teaching and learning, rather it is the structure of the course and the social interactions that take place within it (Baker, 2010; Gorsky & Caspi, 2005). Simply put, if the communication between the instructor and student is increased, then the transactional distance is decreased. Additionally, Moore (1997) argued that dialogue is the social interactions that occur when one gives instruction and the others respond.

In good online education, social interaction is not merely a way to keep in touch but a prime component of learning (Maeroff, 2003). Group e-mail, electronic references, and course websites coupled with online discussions, typically constitute the model of online course delivery (Tremblay, 2006). However, virtual classrooms can be made more imitative of the social interaction found in face-to-face learning. This can be accomplished by exploiting elements of technology such as breakout rooms, video, text chat, application sharing (Tremblay, 2006), Skype, social websites, and traditional telephone communication (Muniz-Solari & Coats, 2009). In keeping with Moore (1997), regardless of the tools utilized, the social interaction that takes place through the use of electronic communication tools should be purposeful, constructive, and valued by each party.

#### *Asynchronous and Synchronous*

Online communication tools are utilized in one of the two formats of online learning: asynchronous or synchronous. The terms asynchronous learning and e-learning are frequently used interchangeably (Levy, 2007) as usually electronic devices and tools such as computers and internet are used in these types of learning (Bouhnik, 2009). An asynchronous online course allows for learning to be delayed over time (Henderson, 2001). Participants are able to attend class on their schedule and are traditionally geographically separated from the instructor and the rest of the participating members. The element of being able to learn at anytime and from anywhere while still providing students with the learning elements of a traditional classroom is considered a major advantage over synchronous learning. The same convenience can also be considered a disadvantage. Wang and Newlin (2002) identified that asynchronous online discussion is slow, limits the type of communication, and removes any feelings of connection.

Students who may feel disconnected or lost in cyberspace (Gosmire, Morrison, & Van Osdel, 2009) due to the lack of face-to-face time with the instructor and online classmates may benefit from the use of varied multimedia and LMS communication tools. Communication tools in an asynchronous classroom are comprised of the discussion board, e-mail, mailing list, calendar, and newsgroups (Erlin, Norazan, & Azizah, 2008).

Synchronous communication is the second format of online learning. In a synchronous online course, learning differs in that the students and instructor can be in different locations but are online at the same time interacting with each other without time delay. Because students and instructors are online at this same time, synchronous learning is considered to be one of the ways to meet the challenge of creating community in an online course (Lavolette, 2010). The major advantage of synchronous learning is the ability to communicate in real-time. Students can ask questions and receive an immediate response. The same advantage can be considered a disadvantage. Students who learn in a synchronous environment must be able to be online at the same time as their instructor and fellow learners. This can be an issue as many online students have work and family obligations that may prohibit them from being online at specific dates and times. Communication tools in a synchronous classroom are comprised of chat, instant messaging, discussion board, e-mail, video conferencing (Erlin et al., 2008), interactive whiteboard, audio, polling, application sharing, web browsing, file sharing, and presentation tools (Lavolette, 2010).

### *Multimedia in Online Learning*

In online courses, insufficient social interaction is cited as a major problem for both students and instructors (Walls, 2005). Yet, there is a plethora of possibilities available for

communicating and/or presenting educational content through text, audio, and video to create meaningful environments that foster and support learning (Collins-Brown, 2005). The use of active learning and varied methods of communication tools fosters an environment that encourages participation and equality integral to the success of the online learning community (Jacobs, 2007). One vital tool in an online course is the discussion board. The discussion board allows for frequent, meaningful, valued, and dynamic discussions that allow students to support and interact with each other (Nagel et al., 2009). Interactivity is an essential characteristic of effective online communication and can lead to not only greater learning but also an enhanced level of motivation (Blau & Gorky, 2009). Class discussions allow for a collaborative, interactive, and supportive learning environment (Jacobs, 2007). Time is a major advantage of online learning, but especially asynchronous learning. It allows students to contemplate, research (Jacobs, 2007), explore, and reflect on the topic (Bowman, 2001) prior to posting or responding, which allows for a richer, more pronounced communication. In online courses that are considered effective, students are expected to treat everyone in the class with respect, demonstrating sensitivity for language, social, and cultural differences (Jacobs, 2007). This level of respectful communication can begin the first week of class by requiring students to post introductory comments about themselves such as research interests, hobbies, and career goals (Jacobs, 2007). Utilizing the online discussion board in a personal and educational manner allows all students an opportunity to share their knowledge and views (Bowman, 2001) as well as actively engage in synthesizing new learning with prior knowledge through respectful debate with classmates (Jacob, 2007). Essentially, students not only learn from their instructor, who provides content expertise and feedback during online learning, but also from each other's

comments and feedback (Erlin et al., 2008). The discussion board is not the only form of online communication.

E-mail is also one of the most commonly used tools of the online educator and virtual students. E-mail has the potential of connecting a student to individual faculty 24 hours a day, 7 days a week (Leidman & Piwinsky, 2009). Because e-mail is not dependent upon time or location, it serves as a vital resource for one-on-one communication between the instructor and the student. E-mail also provides students with access to each other. Students can interact with fellow classmates via e-mail regardless of time and geography boundaries. E-mail provides the student not only a sense of connectedness, but also offers the ability for convenient and quick transfer of information (Dawley, 2007). While the discussion board is a great tool for exchanging ideas and information, it does not offer any form of privacy. If the online discussion board is equivalent to a student asking a question in a live class, then the ability to ask a question or talk via e-mail is equivalent to a student meeting in the instructor's office to talk privately (Dawley, 2007). Additionally, an instructor may only check an online discussion board a couple of times a week, whereas e-mail is usually checked daily, which will offer students a quicker response.

Students who initially enter into an online course may believe that sending e-mails is simplistic. They can simply log into the course, type out what is on their mind, and push send. However, it is often after the send button is pushed that the student starts to regret typed words, the way the e-mail may come across in tone or emotion, or spelling and grammar mistakes. To effectively communicate via e-mail, students and instructors will need to compose their thoughts and ideas clearly and concisely. Because e-mail is the most commonly used tool to communicate in online learning environments, the instructor should establish specific guidelines at the

beginning of the course and expect students to adhere to the guidelines by modeling proper e-mail etiquette.

Taking a cue from the distance delivery methods of the early and mid-1900s, many online courses now include combinations of audio and video components. For today's technology savvy students, audio in online learning presents several advantages. These include but are not limited to the following: the fact that it is inexpensive and readily available, its ease of production and use, the qualities of repeatability and reproducibility, the ability to stimulate listeners and to provide a verbal message for non-readers, and the portability of this medium (Lee & Chan, 2007). Durbridge (as cited by van Zanten, 2008) identified five key advantages of audio learning. Durbridge found that students liked audio because they liked (a) responding to sound; (b) listening in on conversations; (c) being "talked through" tasks; (d) hearing facts, discussions, and opinions from experts in their field; and (e) being encouraged by the voice of somebody they know and respect. One fairly simple way to incorporate audio into online courses is through the use of podcasts. A podcast is simply an audio recording made available online. Podcasts can be downloaded and listened to on portable devices such as an iPod or MP3 player. Not only is podcasting inexpensive and convenient, in distance learning it fosters a sense of inclusivity and belongingness to the learning community, and reduces isolation-induced anxiety (Lee & Chan, 2007). While audio is a significant component of today's online learning environment, video is equally as important. Streaming media such as video and audio can help learners understand complex concepts and procedures that are difficult to explain with simply text and graphics (Klass, 2003). It is important to include audio and video in online courses due to that fact that distance learning instruction in most online courses still primarily uses text-based materials to deliver instruction, and multimedia can add interactivity to these stagnant text-based

materials. By using visual and auditory messages, students can process the information quicker, which, in turn, helps foster their learning acquisition of the material (Hartsell & Yuen, 2006). Video can be used for live instructional broadcasts or recorded instructional activities. Creating instructional material that incorporates audio and/or video components can grab the learners' attention and present information that is easy to understand. Additionally, integrating audio and video into the course can help to introduce concepts and lead course discussions therefore promoting interactivity among and between instructor and students (Hartsell & Yuen, 2006).

Lack of interactivity and engagement can lead to the breakdown of the communication process (Blau & Gorsky, 2009). The electronic communication tools found in most course management systems (e.g., discussion, e-mail, chat, podcasts and messaging) increases the level of social interaction, allowing learners and instructors to reduce the psychological and physical distance between them and achieve levels of social interaction similar to those in face-to-face classrooms (Baker, 2010). Whether learning in a synchronous or asynchronous environment, the use of these forms of media is likely to increase student social interaction and engagement because it allows students to read, listen, watch, and study course materials at a pace and time that accommodates their schedules and preferred modes of learning (CANnect.org, 2010).

### Summary

Retaining a student is fundamental to the ability of an institution to carry out its mission. A high rate of attrition is not only a fiscal problem for schools, but a symbolic failure for an institute to achieve its purpose. Community colleges, regardless of quality or value, are the lowest status institutions and have the lowest rates of retention (StateUniversity, 2011), which is further illustrated in online courses. At a time when students are withdrawing from online

courses at a much higher rate than they withdraw from traditional courses, it is vital to understand the reasons students choose not to continue in a particular online course. Research has concluded that social interaction in the traditional educational setting is indicative to higher retention rates (Palloff & Pratt, 2003; Tinto, 1993) but that can also be contributed to the characteristic profile of a student who enrolls in traditional courses. Community colleges are already made up of students who are considered to be nontraditional and are even more likely to have circumstances that contribute to their need to enroll in online courses. A review of the literature has revealed various theories that have examined student retention in traditional and online education; however, little research has focused specifically on student attrition from online community college courses.

CHAPTER III  
METHODOLOGY

Introduction

The foundation for this study was based in part on a portion of the eastern central Mississippi community college's mission statement, which states that the college seeks to serve a diverse student population through the use of campus-based and distance education programming. That portion of the mission statement can be implied that the quality of education provided to campus students will also apply to online students, yet attrition from online courses was 17% higher than the traditional campus courses during the Fall of 2010. The purpose of this study was to determine factors for student withdrawal from online community college courses. It is aimed at addressing the following research questions:

1. Is there a relationship between student characteristics and withdrawal from online community college courses?
2. Is there a relationship between previous experience with online college courses and withdrawal from online community college courses?
3. Do online community college students withdraw at a higher rate from specific courses?
4. Does the length of time enrolled in an online community college course decrease the likelihood of withdrawal?
5. What are the self-reported reasons for student non-completion of online community college courses?

6. What is the level of satisfaction by learners of the interactive LMS tools in the online course?

7. What is the perception of student engagement prior to withdrawing from an online community college course?

This chapter presents the research design, introduces the selected site, and provides a description of the data collection and analysis.

### Pilot Study

The researcher conducted a pilot study in the Summer of 2011, which was unpublished. Data were obtained for all students enrolled in an online course through the community colleges' student information system (SIS) database. Participants were identified through a withdrawal report in the Mississippi Virtual Community College (MSVCC) database and were sent an email request to participate in the study. A total of 1,501 course enrollments and 294 course withdrawals were recorded during the Summer of 2011. The enrollments were comprised of 657 unduplicated students who ranged in age from 18 years old to 66 years old ( $M = 28.28$ ,  $SD = 8.83$ ). The individual student course enrollments ranged from 1 to 8 courses ( $M = 2.28$ ,  $SD = 1.44$ ). The individual student course withdrawals ranged from 0 to 4 withdrawals ( $M = .44$ ,  $SD = .81$ ). Of the potential 129 students who comprised the 294 course withdrawals, 13 (10%) elected to participate in the pilot study.

Table 1 presents student demographics based on ethnicity, age, and gender available from the SIS database for the entire population of students enrolled in online courses during the Summer of 2011.

Table 1

*Demographics for All Students Enrolled in Online Courses Summer 2011*

	N	
Course Enrollment	1501	
Students	657	
Mean Age / SD	28.28 / 8.83	
Minimum / Maximum / Range	18 / 66 / 48	
Mean number of courses enrolled / SD	2.28 / 1.44	
Minimum / Maximum / Range	1 / 8 / 7	
Gender: n (%)	Male	145 (22.1)
	Female	512 (77.9)
Race or ethnic group: n (%)	African American / Black	320 (48.7)
	Caucasian / White	292 (44.4)
	American Indian	15 (2.3)
	Asian / Pacific Islander	5 (0.8)
	Hispanic	5 (0.8)
	Multi-Racial / Other	20 (3.0)
Age: n (%)	18-23	266 (40.0)
	24-29	144 (22.0)
	30-35	120 (18.0)
	36-41	59 (9.0)
	42-47	43 (7.0)
	48-53	17 (3.0)
	54-59	9 (1.0)
	65 or older	1 (0.0)

Table 2 presents student demographics based on ethnicity, age, and gender available from the SIS database for the unduplicated population of students who withdrew from online courses during the Summer of 2011.

Table 2

*Demographics for Students Withdrawn from Online Courses Summer 2011*

	N	
Course Withdrawals	294	
Students	129	
Mean Age / SD	28.51 / 8.58	
Minimum / Maximum / Range	19 / 58 / 39	
Mean number of courses dropped / SD	1.54 / .83	
Minimum / Maximum / Range	0 / 5 / 5	
Gender: n (%)	Male	19 (14.7)
	Female	110 (85.2)
Race or ethnic group: n (%)	African American / Black	75 (58.1)
	Caucasian / White	42 (32.6)
	American Indian	3 (2.3)
	Asian / Pacific Islander	1 (0.8)
	Hispanic	2 (1.6)
	Multi-Racial / Other	6 (4.7)
Age: n (%)	18-23	46 (35.7)
	24-29	32 (24.8)
	30-35	26 (20.2)
	36-41	15 (11.5)
	42-47	5 (3.9)
	48-53	2 (1.6)
	54-59	3 (2.3)
	65 or older	0 (0.0)

The results of a chi-square test of independence indicated a statistically significant association,  $\chi^2(1) = .025, p < .05$ , between gender and course withdrawals. As illustrated in Table 3, the observed number of female students who withdrew from online courses was 110, which was an increase of 9 more than was expected. When compared to the observed number of male students who withdrew, there was a significantly larger percentage of female withdraws than male withdraws.

Table 3

*Student Course Status by Gender Summer 2011*

Status	Enrollment Status by Gender		
		Male	Female
Withdrawn	Observed n	19.0	110.0
	Expected n	28.5	100.5
Active	Observed n	126.0	402.0
	Expected n	116.5	411.5

The results of a chi-square test of independence did not indicate a statistically significant association,  $\chi^2(5) = .057, p < .05$ , between ethnicity and course withdrawals. The frequencies in Table 4 show that only minor differences existed between the observed and expected values in each cell.

Table 4

*Student Course Status by Ethnicity Summer 2011*

		Enrollment Status by Ethnicity	
		Withdrawn	Active
African American/Black	Observed	75.0	245.0
	Expected	62.8	257.2
Caucasian/White	Observed	42.0	250.0
	Expected	57.3	234.7
American Indian	Observed	3.0	12.0
	Expected	2.9	12.1
Asian/Pacific Islander	Observed	1.0	4.0
	Expected	1.0	4.0
Hispanic	Observed	2.0	3.0
	Expected	1.0	4.0
Multi-Racial/Other	Observed	6.0	14.0
	Expected	3.9	16.1

With respect to marital status, students were categorized as single, married, divorced, widowed, or in a committed relationship. The students' marital status was recorded by the students who participated in the survey at the time of their withdrawal from online courses. At the time of withdrawal, the greatest number of students ( $n = 6$ , 46.2%) reported that they were single at the time of withdrawal. The second greatest number of students ( $n = 5$ , 35.5%) reported that they were married at the time of withdrawal. At the time of withdrawal, no students reported being in committed relationships. Table 5 summarizes the data related to marital status at the time of student withdrawal.

Table 5

*Marital Status of Surveyed Students Summer 2011*

	n	%
Single	6	46.2
Married	5	38.5
Divorced	1	7.7
Widowed	1	7.7
Committed relationship	0	0.0
Totals	13	100

*Note.* Selection options were limited to single, married, divorced, widowed, or in a committed relationship.

At the time of withdrawal, each number of students surveyed reported the number of minors, children under the age of 18, who resided in their homes. Most students were childless ( $n = 5$ , 38.5%), with a range of children among withdrawn students from none to four or more.

The data related to number of children is presented in Table 6.

Table 6

*Number of Minor Children in the Home Summer 2011*

	n	%
None	5	38.5
One	2	15.4
Two	4	30.8
Three	1	7.7
Four or More	1	7.6
Totals	13	100

Table 7 contains the results of the descriptive analysis for prior experience with an online course. For the 13 students who completed the survey, 38.5% ( $n = 5$ ) reported Summer 2011 as being their first experience with an online course. The mean number of students reporting the Summer of 2011 as being their first online experience was 1.61 with a standard deviation of .506. A comparison of the mean and median suggests a negative distribution with values in the low end. This is supported by a negative skewness ( $sk = -.539$ ). A greater number of students 61.5% ( $n = 8$ ) reported that they had enrolled in an online course prior to the Summer of 2011. The mean number of students reporting prior experience with online courses in the last two years was 1.76 with a standard deviation of 1.73.

Table 7

*Prior Experience in Online Courses Summer 2011*

	<i>M</i>	<i>SD</i>	Median	Skewness
First Experience with Online Course	1.61	.506	2.0	-.539
Number of Online Courses Completed in Last Two Years	1.76	1.73	1.0	.642

Table 8 reviews the data on prior experience with online courses and shows the frequency and percentage of the surveyed students. The greatest number of students ( $n=3$ , 23.1%) who withdrew from an online course(s) during the Summer of 2011 reported having enrolled in one prior online course. Two students (15.4%) who withdrew from their online course(s) reported enrolling in four online courses prior to the Summer of 2011.

Table 8

*Number of Online Courses Enrolled Into Prior to Summer 2011*

	n	%
One	3	23.1
Two	2	15.4
Three	1	7.7
Four	2	15.4
Five or More	1	7.7
Totals	13	100

A total of 294 course withdrawals were recorded during the Summer 2011 online semester. As illustrated in Figure 5, students withdrew at a greater rate from online courses in the divisions of Science (29.9%), Social Science (24.8%), and Language (22.8%). Review of the findings indicates that students are more likely to withdraw from courses within these specific college divisions. Of the 13 students who responded to the online survey, 4 students (30%) reported withdrawing from Chemistry, 2 students (15%) reported withdrawing from Principles of Biology, and 2 students (15%) reported withdrawing from English Composition I. Figure 5 also illustrates that students withdrew at a lower rate from online courses in the division of Student Success (2.4%), Business Office Technology (2.7%), and Mathematics (7.5%).

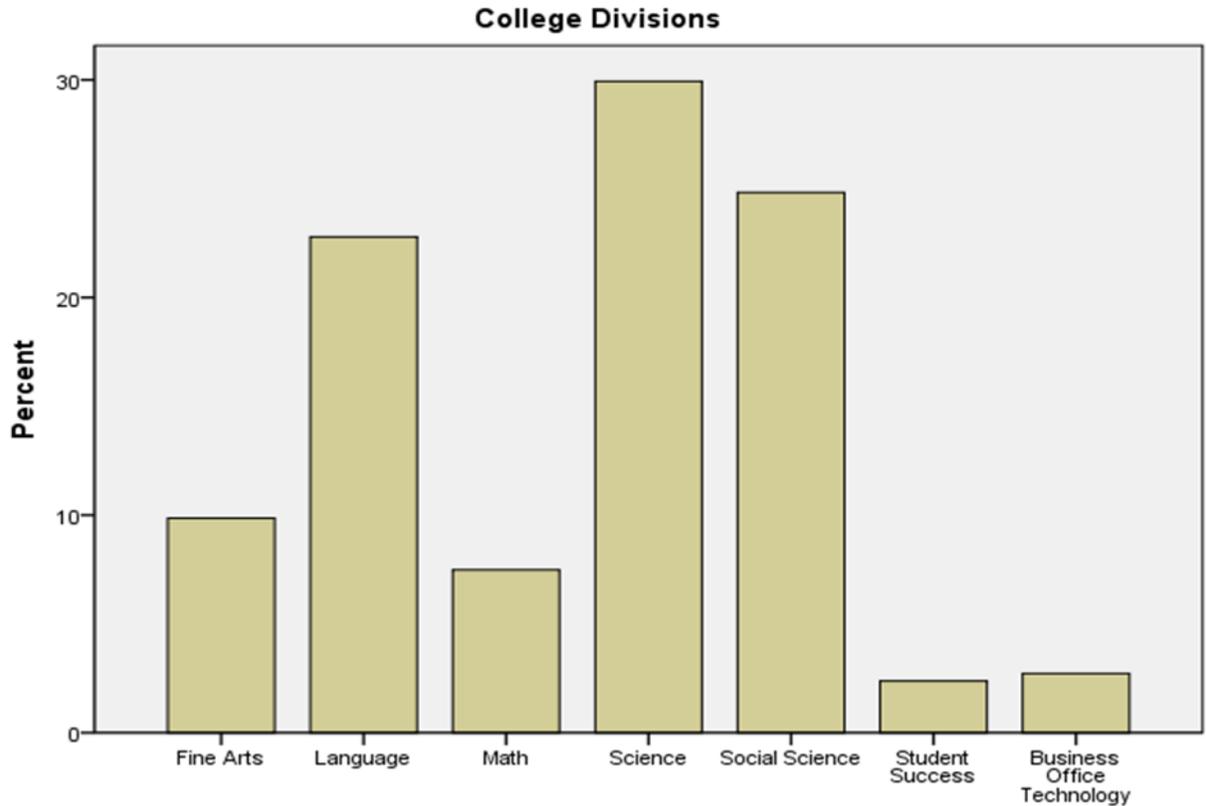


Figure 5. Percentage of student withdrawal by college division.

Table 9 reviews the data on course withdraws by week and shows the frequency and percentage by students. During the Summer of 2011, students were able to withdraw from Week 1 to Week 7 ( $M = 3.39$ ,  $SD = 1.95$ ). The greatest number of students ( $n = 30$ , 23.3%) reported withdrawing during Week 1. The second greatest number ( $n = 22$ , 17.1%) was recorded during Week 2. Week 3 and Week 6 reported identical student withdraws ( $n = 20$ , 15.5%), which were also the third and fourth highest weeks of withdrawal, respectively. Week 7 out of an 8-week term reported the least amount of student withdraws ( $n = 7$ , 5.4%).

Table 9

*Course Withdrawals by Week Summer 2011*

	n	%
Week 1	30	23.3
Week 2	22	17.1
Week 3	20	15.1
Week 4	15	11.6
Week 5	15	11.6
Week 6	20	15.5
Week 7	7	5.4
Totals	129	100

Table 10 reviews the frequency and percentage of total course enrollments and withdrawals by students who withdrew during the Summer of 2011. Total course enrollments by students who eventually withdrew during the Summer of 2011 ranged from one to six ( $M = 2.34$ ,  $SD = 1.31$ ). The greatest number (36.4%) of students who eventually withdrew only registered for one online course. Only one (1%) student recorded having enrolled in six online courses and s/he did not withdraw from any of the six enrolled online courses. Total course withdrawals during the Summer of 2011 ranged from one to five. The greatest number (59.7%) of students reported withdrawing from one online course. One student (1%) reported withdrawing from five of the online courses in which they were enrolled.

Table 10

*Course Enrollment Activity by Withdrawn Students Summer 2011*

	Courses Active n (%)	Courses Withdrawn n (%)
One	47 (36.4)	77 (59.7)
Two	31 (24.0)	38 (29.5)
Three	20 (15.5)	9 (7.0)
Four	23 (17.8)	4 (3.1)
Five	7 (5.4)	1 (0.8)
Six	1 (0.8)	0 (0.0)
Totals	129	129

Table 11 reviews the percentage of student satisfaction with tools available for use in the LMS. Students who withdrew from online courses during Summer 2011 reported *Did Not Use this Tool* with the highest percentage on seven out of the nine tools available. The only tool that did not receive a ranking under *Did not Use this Tool* was e-mail, which received a satisfaction rating of 38.5%. Four of the nine tools, podcasts, journals, Wimba pronto, and Wimba classroom, received a 0% under *Very Satisfied*. E-mail (30.8%) and discussion board (15.4%) received the greatest ranking under *Very Satisfied* even though only five of the nine tools received a ranking of *Very Satisfied*. Blogs (7.7%) and e-mail (15.4%) were the only two tools that received a ranking of *Very Dissatisfied*. Six of the tools received a *Neutral* ranking of 15.4%.

Table 11

*Student Level of Satisfaction with LMS Tools Summer 2011*

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Did Not Use this Tool
Podcasts	0%	23.1%	15.4%	0%	0%	61.5%
Discussion Board	15.4%	46.2%	30.8%	0%	0%	7.7%
Blogs	7.7%	15.4%	23.1%	0%	7.7%	46.2%
E-mail	30.8%	38.5%	15.4%	0%	15.4%	0%
Journals	0%	15.4%	15.4%	0%	0%	69.2%
Video Clips	7.7%	23.1%	15.4%	0%	0%	53.8%
Audio Clips	7.7%	23.1%	0%	0%	0%	69.2%
Wimba Pronto	0%	7.7%	15.4%	0%	0%	76.9%
Wimba Classroom	0%	7.7%	15.4%	0%	0%	76.9%

Table 12 reviews the percentage of student perception of LMS tools being an effective means of communication in an online course. Four of the six tools received the highest percentage under *Did Not Use this Tool*, indicating that communication primarily took place via two of the six communication tools. Primarily, communication took place via e-mail or discussion board both of which received the highest ranking under *Strongly Agree*. Of the six tools, the discussion board received the highest ranking (38.5%) of students strongly agreeing that it was an effective means of communication. Of the students who participated in the survey, 0 reported e-mail as *Did Not Use this Tool*, which indicates it was one of the primary methods of communication in the online course prior to the student withdrawing. Additionally, e-mail was the only tool to receive a ranking under *Disagree* (15.4%) and *Strongly Disagree* (7.7%).

Table 12

*LMS Tools As Effective Means of Communication Summer 2011*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Did Not Use This Tool
E-mail	30.8%	30.8%	15.4%	15.4%	7.7%	0.0%
Wimba Classroom	0.0%	0.0%	15.4%	0.0%	0.0%	84.6%
Wimba Pronto	0.0%	0.0%	15.4%	0.0%	0.0%	84.6%
Discussion Board	38.5%	15.4%	15.4%	0.0%	0.0%	30.8%
Blogs	15.4%	0.0%	7.7%	0.0%	0.0%	76.9%
Journals	15.4%	0.0%	7.7%	0.0%	0.0%	76.9%

Table 13 contains the results of the descriptive analysis for student engagement prior to withdrawal. For the 13 students who participated in the survey, 46.2% disagreed that the online course allowed them to get to know their fellow classmates. A comparison of the mean and the median suggests a negative distribution with values in the low end. This is supported by a negative skewness value ( $sk = -.704$ ). The same percentage of students disagreed that the online course allowed them to develop friendships. Additionally, 23.1% of students strongly disagreed and 38.5% disagreed with the statement that they communicated with fellow classmates even when the assignment did not require it which indicates that 38.5% of students who withdrew chose to communicate with fellow classmates on their own accord. A negative skewed distribution ( $sk = -2.00$ ) was reported when students were asked to rate whether online communications with their classmates helped them with the learning process in online courses while a positive skewed distribution ( $sk = 1.53$ ) was reported in regards to whether the online communications with the instructor helped with the learning process. This is supported by 30.8% of students strongly agreeing that online communications with the instructor helped with the online learning process. Table 13 indicates that students agreed with statements regarding communication with the instructor and disagreed with statements regarding friendships and

communication with fellow classmates based on a scale of 1 = *Strongly Agree* and 5 = *Strongly Disagree*.

Table 13

*Student Engagement Prior to Withdrawal Summer 2011*

	<i>M</i>	<i>SD</i>	Median	Skewness
Even though I was not in a physical classroom, I still felt like I was a part of a learning group or that I belonged.	2.53	1.33	3.0	.279
The online course allowed for social interaction.	2.46	.96	2.0	.127
The online course allowed me to get to know my fellow classmates.	3.07	1.03	3.0	-.704
The online course allowed me to get to know my instructor.	3.07	1.03	3.0	.023
My instructor was prompt in responding to emails and/or phone calls.	2.58	1.08	2.0	1.03
I was able to develop friendships in this course.	3.69	.85	4.0	-.241
I was able to communicate effectively in this online course.	2.84	1.28	3.0	.615
The online discussions allowed me to build relationships with my fellow classmates and instructors.	3.38	1.28	2.0	-.499
The online course allowed me to build relationships based on the sharing and exchange of ideas.	3.15	1.21	3.0	-.012
Social interaction in the online course allowed me to convey my thoughts and feelings.	3.15	1.21	3.0	-.012
I communicate with my online classmates even when the assignment does not require it.	3.69	1.03	4.0	-.344
Online communications with my classmates helped me with the learning process in online courses.	3.2	1.23	3.0	-.200
Online communications with my instructor helped with the learning process in the online course.	2.84	1.62	3.0	.153

Setting

The research site is a community college that is located in a city less than 90 miles from the Mississippi state capital and boasts a population of 38,000, which is comprised of 46% females and 54% males. Additionally, the city's ethnical make-up is 44% Caucasian, 54% African American, and 2% other. The average household income is \$25,000 (Citydata, 2009).

The research site is a small, eastern central Mississippi, 2-year community college, which was founded in 1937 as the 13th and 14th grades of one of the local area high schools and did not become formalized as a community college until 1980 when it adopted its own district and Board of Trustees. Currently, the College offers General Education classes, 2-year programs, University Transfer, and Community Education courses. The College also offers online courses for these offerings through the Mississippi Virtual Community College (MSVCC).

The MSVCC is a consortium of Mississippi's 15 community colleges that makes it possible for these colleges to leverage their distance learning resources--including faculty, courses, support services, and technology. Through the MSVCC, students may take courses from community colleges anywhere in Mississippi while getting support services from a local college. To take a course from a remote college, a student enrolls at a local community college. The host college supports the student with a full slate of student services, including advisement and counseling, financial aid, and learning resources. The host college awards credit for the course. The remote college provides the course instruction. (MSVCC, 2011, para. 1)

During the Fall of 2010, the community college had an overall enrollment of 3,979 students. The student body was comprised of 32.55% male and 67% female. Of the total enrollment, 2,945 students were enrolled full-time and 1,034 students were enrolled part-time. The ethnic make-up of the student body was comprised of 50.16% Caucasian students, 45.52% African-American students, and the remainder of the student body (5.32%) was Hispanic, American Indian, or Race Unknown. Of the total enrollment, 2,522 of the students were enrolled in at least one online course. The retention rate in the online courses was less than 60% (59.2%) and the attrition rate was 30%, which is 17% higher than the attrition rate of the traditional courses.

Instructors for the online courses are either adjuncts who teach less than four courses or full-time faculty members who teach a maximum load of seven courses per year whether online, traditional, or a mixture of the two. Online courses are maintained using Blackboard 9.1 as the

LMS. Instructors receive voluntary training on Blackboard and other technological resources from the Office of E-Learning and through academy courses offered through the MSVCC. Training for online courses is not mandatory; therefore, enrollment by the instructors in the training courses is low. The MSVCC (2011) reported that the research site had a total enrollment of 40 in the academy courses over the last 2 years. The enrollment was comprised of predominately the same instructors taking multiple course offerings. Additionally, the Office of E-Learning provides training throughout the academic year and for 2010 had approximately 150 enrollments with many of the same instructors attending multiple training courses. With over 100 instructors teaching the online courses, it is estimated that over one-third of the instructors have not recently attended a training session. The community college selected is the employer for the researcher and was selected for convenient access to the data with full disclosure and support from the institution's senior administration.

### Participants

The target population of this study consisted of full-time and part-time students who had withdrawn from an online class at a Mississippi community college. Because the college is a part of the MSVCC, it is possible that students who withdraw can be a resident in any district within the state of Mississippi. Students who withdraw from online courses were identified through a drop report that is maintained in the Enrollment Tool, a database for the MSVCC. Students received an e-mail through their campus e-mail address notifying them of the research study and the importance of the data as well as a link to the questionnaire. The total number of students surveyed was 490. The response rate to the survey equaled 10.8%; however, use of the SIS database allowed for demographic characteristics, course enrollment, course withdrawal, and last

week of attendance to be obtained for 100% of the online students. Only the withdrawn students were asked to complete the questionnaire as this research project is designed to determine factors for student withdrawal from online course offerings.

### Instrumentation

A researcher-developed survey that combined information from a pilot study and a convergence model of five retention theories was utilized for this study. The time involved in developing the instrument took place in several stages. Through the literature review, proposal defense, IRB request to conduct research, and pilot study, the survey was developed, refined, and revised. The instrument was designed based on information gathered from the literature review to look at the social interaction and demographics (age, gender, and racial or ethnic background, marital status, number of dependent children, employment status) of students who withdrew from online courses at an eastern central Mississippi community college. Because the survey used in this study was developed by the researcher, it was important to establish validity. Validity measures the meaningfulness and usefulness of the inferences that can be made from the data (Gall, Borg, & Gall, 1996). The content validity of the survey was determined through a review by educators with knowledge in the field of instructional technology and educators with knowledge of working with and around community college students. The questionnaire was administered online and assessed various possible factors associated with student attrition from online community college courses. Because this instrument was used in a pilot study, the pilot study participants were removed from the list of participants in this study. The pilot study provided valuable information regarding the appropriateness of instructions and items contained in the survey.

## Data Collection

Data were collected through the use of an online questionnaire developed to identify possible factors for student attrition from an online community college course. The online questionnaire was operated via a virtual platform, Survey Monkey. Demographic information was obtained to determine whether there was an underlying relationship between students who withdrew from online courses and their demographic characteristics. In addition, the instrument collected data regarding whether engagement or a lack thereof was a significant reason for students not completing the online course. Students were also asked if they had any prior experience with online courses and if they would consider registering for another online course in the future. Additional data were obtained for all students enrolled in an online course through the community colleges' student information system (SIS) database.

Due to the fact that traditional research methods can be expensive and time consuming and because the students were familiar with virtual communication, it was favorable to collect the data electronically. Online questionnaires are efficient and can cost-effectively collect large amounts of data in a relatively short amount of time (Lefever & Dal, 2007). Online questionnaires do require some consideration such as they must clearly state the purpose, be user-friendly, easy to complete, and provide confidentiality and security (Beam, 2005). Overall, the convenience, access to respondents, time and cost savings, and electronically formatted results derived from online questionnaires make this collection method the choice of more and more researchers (Lefever & Dal, 2007).

At the beginning of the Fall 2011 term, an electronic message was posted to the LMS notifying students that they would be requested to complete the questionnaire if they withdrew from an online course. This electronic message served as a courtesy to the students to encourage

them to participate. The e-mail address of the participants was retrieved from a list generated in the Enrollment Tool, a database system managed by the MSVCC. On the day that a student withdrew from an online course, he or she received an e-mail message, including the survey link, explaining the objective of the research, its importance, information pertaining to confidentiality, instructions for completing the questionnaire, and a link to the questionnaire. Survey Monkey allowed for the link to be uniquely tied to each individual student. Therefore, it was convenient to send the second and the final third emails to students who did not participate on the first and second survey, accordingly. Student privacy was carefully protected and students were not asked to provide their names or other identification. Additionally, because not all students who withdraw from online courses will continue to check their school e-mail account, a printed postcard was mailed within one week of withdrawing from the online course. Student addresses were located from the school's student information system. The postcard included the objectives of the research, the printed link to the survey, and a reminder that the survey had also been e-mailed to their school e-mail address.

### Data Analysis

This research study's methodology was selected by considering the most appropriate approaches to answer the research questions. The data submitted via the Survey Monkey website were collected into a comma-delimited text file. Microsoft Excel was used to convert the text to numerical form. Various data analysis methods including descriptive statistics, and chi-square tests of independence were incorporated to determine reliability, validity, and significance. Quantitative statements for the Likert-type questions were analyzed using the Statistical Package for the Social Sciences (SPSS®) software. The 5-point scale for the data analysis varied from

*Very Satisfied* (5), *Satisfied* (4), *Neutral* (3), *Dissatisfied* (2), and *Very Dissatisfied* (1) to *Strongly Agree* (5), *Agree* (4), *Neutral* (3), *Disagree* (2), and *Strongly Disagree* (1). Qualitative data were gathered through an open-ended questionnaire submitted via Survey Monkey. Olson (2007) stated that qualitative research is good for understanding meaning and participants' perspective, context across individuals and situations, unanticipated phenomena in exploratory studies and identifying variables which may emerge, unfolding processes, and cause and effect relationships.

Demographic data were analyzed to describe the characteristics of the participants in this study. Qualitative data were sorted and arranged into a coding process to assist in making sense of the complete study. The coding of responses to the interview questions represented variables that were relevant to the research objectives (Gall et al., 1996). Data were organized into chunks before beginning the process of decoding meaning from the results. Descriptive statistics were used to analyze all components of the survey.

Research Question 1 was addressed by using responses from items 1-7 on the survey and was analyzed using descriptive statistics and chi-square tests of independence. Frequency tables provide additional information.

Research Question 2 was addressed by using responses from items 8-10 on the survey and was analyzed using descriptive statistics and a chi-square test of independence. Frequency tables provide additional information.

Research Question 3 was addressed by using responses from item 11 on the survey and was analyzed using descriptive statistics. Frequency tables provide additional information.

Research Question 4 was addressed by using responses from item 12 on the survey and was analyzed using descriptive statistics. Frequency tables provide additional information.

Research Question 5 was addressed by using responses from item 13 on the survey and was analyzed using qualitative content analysis.

Research Question 6 was addressed by using responses from item 14 on the survey and was analyzed using descriptive statistics. Frequency tables provide additional information.

Research Question 7 was addressed by using responses from items 15 and 16 on the survey and was analyzed using descriptive statistics. Frequency tables provide additional information.

## CHAPTER IV

### RESULTS

#### Introduction

The purpose of this study was to examine factors for student withdrawal from online community college courses. The foundation for this study was based in part on a portion of the eastern central Mississippi community college's mission statement, which states that the college seeks to serve a diverse student population through the use of campus-based and distance education programming. Additionally, the community college in the study is a part of a consortium of 15 community colleges that offer online courses through the MSVCC. By using a convergence of five retention theory models, students who withdrew from online courses and participated in the study were asked questions that determined their demographic characteristics, experience with online learning, and engagement and interaction within the course site.

This chapter reports the results of a survey of student withdrawal from online community college courses as well as the data obtained in the student information system. Both quantitative and qualitative responses were analyzed for a more holistic examination using descriptive summaries, chi-square analyses, and survey response analysis. This chapter presents the findings for this study.

#### Research Process

Data were obtained for all students enrolled in an online course through the community colleges' student information system (SIS) database. Participants were identified through a

withdrawal report in the Mississippi Virtual Community College (MSVCC) database. This study sought permission from the administrators at the college and at the Mississippi Community College Board, which governs the MSVCC. Permission was received by the administrators. The online survey was developed on a professional website designed to collect and store data from survey responses. A total of 1,566 students enrolled in online courses during the course of this study. Upon IRB approval, invitations to participate in the survey were emailed to the 490 students who had withdrawn from an online course during the research period. Participants began completing the survey in August 2011 and the survey concluded in November 2011 when withdrawing from an online course was no longer available to the students as per the research site's academic calendar.

#### Demographic Data

A total of 3,691 course enrollments and 773 course withdrawals were recorded during the Fall of 2011. The enrollments were comprised of 1,566 unduplicated students who ranged in age from 17 years old to 75 years old ( $M = 27.70$ ,  $SD = 8.50$ ). The individual student course enrollments ranged from 1 to 11 courses ( $M = 2.35$ ,  $SD = 1.59$ ). The individual student course withdrawals ranged from 1 to 5 withdrawals ( $M = 1.57$ ,  $SD = 0.86$ ). Of the potential 490 students who comprised the 773 course withdrawals, 53 (10.8%) elected to participate in the research study. Table 14 presents student demographics based on ethnicity, age, and gender available from the SIS data for the entire population of students enrolled in online courses during the Fall of 2011.

Table 14

*Demographics for All Students Enrolled in Online Courses Fall 2011*

	N	
Course Enrollments	3691	
Students	1566	
Mean Age / SD	27.70 / 8.50	
Minimum / Maximum / Range	17 / 75 / 58	
Mean number of courses enrolled / SD	2.35 / 1.59	
Minimum / Maximum / Range	1 / 11 / 10	
Gender: n (%)	Male	767 (20.8)
	Female	2924 (79.2)
Race or ethnic group: n (%)	African American / Black	2081 (56.4)
	Caucasian / White	1402 (38.0)
	American Indian	83 (2.2)
	Asian / Pacific Islander	11 (0.3)
	Hispanic	15 (0.4)
	Multi-Racial / Other	99 (2.7)
Age: n (%)	18-23	1548 (42.0)
	24-29	854 (23.3)
	30-35	588 (18.7)
	36-41	298 (7.9)
	42-47	181 (4.9)
	48-53	89 (2.4)
	54-59	25 (.06)
	60-64	4 (0.1)
	65 or older	4 (0.1)

## Research Question 1

Is there a relationship between student characteristics and withdrawal from online community college courses? This research question was answered through participants' responses to survey questions 1-7. These questions attempted to identify a relationship between student demographic and environmental characteristics to withdrawing from online community college courses. The questions were located on the questionnaire under the category titled *Student Characteristics*. Frequency tables utilizing data from the SIS provided additional information.

Table 15 presents student demographics based on ethnicity, age, and gender available from the SIS data for the unduplicated population of students who withdrew from online courses during the Fall of 2011.

Table 15

*Demographics for Students Withdrawn from Online Courses Fall 2011*

	N	
Course Withdrawals	773	
Students	490	
Mean Age / SD	27.85 / 8.53	
Minimum / Maximum / Range	17 / 63 / 46	
Mean number of courses dropped / SD	1.57 / 0.86	
Minimum / Maximum / Range	1 / 5 / 4	
Gender: n (%)	Male	89 (18.2)
	Female	401 (81.8)
Race or ethnic group: n (%)	African American / Black	305 (62.2)
	Caucasian / White	166 (33.9)
	American Indian	1 (0.2)
	Asian / Pacific Islander	1 (0.2)
	Hispanic	3 (0.6)
	Multi-Racial / Other	14 (2.9)
Age: n (%)	18-23	206 (42.0)
	24-29	115 (23.6)
	30-35	84 (17.3)
	36-41	42 (8.4)
	42-47	27 (5.4)
	48-53	10 (2.0)
	54-59	5 (1.0)
	60-64	4 (0.2)
	65 or older	0 (0.0)

The results of a nonparametric chi-square test of independence using the expected values did not indicate a statistically significant association,  $\chi^2(1) = .001, p < .05$  between gender and course withdrawals (see Table 16). While the female gender has a significantly higher number of

course enrollments (78.9%) and withdrawals (80.5%) when compared to males, the expected and observed numbers do not show significant variance.

Table 16

*Chi-Square Test for Gender Fall 2011*

	Pearson Chi-Square Test	
Gender	Chi-square	.001
	<i>df</i>	1
	Sig.	.976*

*Note.* The Chi-square statistic is significant at the 0.05 level.

The results of a nonparametric chi-square test of independence using the expected values did not indicate a statistically significant association,  $\chi^2(5) = 0.49, p < .05$ , between ethnicity and course withdrawals (see Table 17). African Americans had the highest number of course withdrawals (62.2%) but also had the highest number of course enrollments (56.4%). Caucasian students had the second highest course withdrawals (33.9%) but also held the second highest course enrollment (38.0%). American Indian and Asian/Pacific Islanders held a withdrawal rate of 0.2%, respectively, but American Indian students comprised 2.2% of the course enrollments while Asian/Pacific Islander students only comprised 0.3% of the overall course enrollments.

Table 17

*Chi-Square Test for Ethnicity Fall 2011*

	Pearson Chi-Square Test	
Ethnicity	Chi-square	.049
	<i>df</i>	5
	Sig.	1.000*

*Note.* The Chi-square statistic is significant at the 0.05 level.

With respect to marital status, students were categorized as single, married, divorced, widowed, or in a committed relationship. The students' marital status was recorded by the students who participated in the survey at the time of their withdrawal from online courses. At the time of withdrawal, the greatest number of students ( $n = 26$ , 49.1%) reported that they were single at the time of withdrawal. The second greatest number of students ( $n = 16$ , 30.2%) reported that they were married at the time of withdrawal. The least number of students ( $n = 2$ , 3.8%) reported as being widowed. Table 18 summarizes the data related to marital status at the time of student withdrawal.

Table 18

*Marital Status of Surveyed Students Fall 2011*

	n	%
Single	26	49.1
Married	16	30.2
Divorced	5	9.4
Widowed	2	3.8
Committed Relationship	4	7.5
Totals	13	100

*Note.* Selection options were limited to single, married, divorced, widowed, or in a committed relationship.

Surveyed students were asked to indicate the number of hours worked per week and overall enrollment status at the community college. Tables 19 and 20 provide the frequencies and percentages of the surveyed students.

Table 19

*College Enrollment Status of Surveyed Students Fall 2011*

	n	%
Part-Time	13	24.5
Full-Time	38	71.7
Not Indicated	2	3.8
Totals	53	100.0

Table 20

*Employment Status of Surveyed Students Fall 2011*

	n	%
I am not currently employed	21	39.6
1-15 Hours	2	3.8
16-30 Hours	8	15.1
31-45 Hours	17	32.1
46-60 Hours	4	7.5
Not Indicated	1	1.9
Totals	53	100.0

At the time of withdrawal, students surveyed reported the number of minors (children under the age of 18) who resided in their homes. Of the 53 students who participated in the survey, 1 student elected to not answer this question. Most students ( $n = 17$ , 32.1%) reported having one minor child in the home while 28.3% ( $n = 15$ ) reported no minor children in the home. Only 9.4% ( $n = 5$ ) reported having four or more minor children in the home at the time of withdrawing from an online course. The data related to number of children are presented in Table 21.

Table 21

*Number of Minor Children in the Home Fall 2011*

(n = 52)	n	%
None	15	28.3
One	17	32.1
Two	8	15.1
Three	7	13.2
Four or More	5	9.4
Totals	52	100.0

Research Question 2

Is there a relationship between previous experience with online college courses and withdrawal from online community college courses? This research question was answered through participants' responses to survey questions 8-10. These questions attempted to identify a relationship between current and existing experience with an online course to withdrawing from online community college courses. The questions were located on the questionnaire under the category titled *Online Experience*. Frequency tables utilizing data from the SIS provided additional information.

Table 22 contains the results of the descriptive analysis for prior experience with an online course. For the 48 students who responded to these questions, 22.6% ( $n = 12$ ) reported Fall 2011 as being their first experience with an online course ( $M = 1.75$ ,  $SD = 0.43$ ). A comparison of the mean and median suggests a negative distribution with values in the low end. This is supported by a negative skewness ( $sk = -1.192$ ). A greater number of students, 67.9% ( $n = 36$ ), reported that they had enrolled in an online course prior to the Fall of 2011; however, 35.8% ( $n = 19$ ) reported that they had never taken an online course when asked about online course

experience in the last two years. Additionally, 11.4% ( $n = 6$ ) reported having taken six or more online courses in the last two years.

Table 22

*Prior Experience in Online Courses Fall 2011*

	<i>M</i>	<i>SD</i>	Median	Skewness
First Experience with Online Course	1.75	.437	2.0	-1.192
Number of Online Courses Completed in Last Two Years	2.93	2.22	2.0	1.000

Note. ( $n = 48$ ).

Table 23 reviews the data on prior experience with online courses and shows the frequency and percentage of the surveyed students. The greatest number of students ( $n = 8$ , 15.1%) who withdrew from an online course(s) during the Fall of 2011 reported having enrolled in one prior online course. Three students (5.7%) who withdrew from their online course(s) reported enrolling in seven or more online courses prior to the Fall of 2011.

Table 23

*Number of Online Courses Enrolled Into Prior to Fall 2011*

	n	%
One	8	15.1
Two	4	7.5
Three	6	11.3
Four	5	9.4
Five	0	0.0
Six	3	5.7
Seven or More	3	5.7
Totals	48	100.0

The results of a chi-square test of independence indicated a statistically significant association,  $\chi^2(1) = 1, p < .05$ , between prior experience with online course enrollment and online course attrition (see Table 24). These findings indicate that students who have prior experience with enrolling and withdrawing from online courses are more likely to do so again.

Table 24

*Chi-Square Test for Prior Experience Fall 2011*

	Pearson Chi-Square Test	
Prior Experience	Chi-square	7.978
	<i>df</i>	1
	Sig.	.005*

*Note.* The Chi-square statistic is significant at the 0.05 level.

### Research Question 3

Do online community college students withdraw at a higher rate from specific courses? This research question was answered through participants' responses to survey question 11. This question attempted to identify the academic discipline from which students were most likely to withdraw. Students were able to identify the course by prefix (i.e., BIO) or by subject (i.e., Science). Frequency tables utilizing data from the SIS provided additional information on course withdrawals by academic discipline.

A total of 773 course withdrawals were recorded during the Fall 2011 online semester. Table 25 reviews the data on course withdrawals by college division. Students withdrew at a greater rate from online courses in the divisions of Social Science (30.7%), Science (25.0%), and Language (10.5%). These disciplines also had the highest rate of withdrawal during the Summer 2011 pilot study, which included withdrawal rates from Science (29.9%), Social Science (24.8%) and Language (22.8%). The findings suggest that students are more likely to withdraw from

courses within these specific college divisions. Additionally, students withdrew at a lower rate from Student Success (1.2%), Business Office Technology (8.9%), and Mathematics (10.0%). These disciplines also had the lowest rate of withdrawal during the Summer 2011 pilot study, which included withdrawal rates from Student Success (2.4%), Business Office Technology (2.7%), and Mathematics (7.5%). Of the 44 students who responded to this question on the survey, 8 students (17.1%) reported withdrawing from an English Composition course, 6 students (11.4%) reported withdrawing from Chemistry, and 4 students (7.6%) reported withdrawing from Introduction to Philosophy.

Table 25

*Course Withdrawal by College Division Fall 2011*

	n	%
Fine Arts	81	10.5
Language	107	13.8
Mathematics	77	10.0
Science/Wellness	193	25.0
Social Science	237	30.7
Student Success	9	1.2
Business Office Technology	69	8.9
Totals	773	100

Research Question 4

Does the length of time enrolled in an online community college course decrease the likelihood of withdrawal? This research question was answered through participants' responses to survey question 12. This question attempted to identify if the amount of time a student spent in an online course was a determinate for withdrawing. The question was located on the questionnaire under the category titled *Online Experience*. Frequency tables utilizing data from the SIS provided additional information.

Table 26 reviews the data on course withdrawals by week and shows the frequency and percentage by students. During the Fall of 2011, students were able to withdraw from Week 1 through the end of Week 11 ( $M = 5.95$ ,  $SD = 3.33$ ). The greatest number of students ( $n = 92$ , 11.9%) reported withdrawing during the last available week. The second greatest number ( $n = 88$ , 11.4%) was recorded during Week 1. Week 2 ( $n = 72$ , 9.3%) and Week 5 ( $n = 73$ , 9.4%) reported similar withdrawal rates, which were also the fourth and fifth highest weeks of withdrawal, respectively. Weeks 7 and 10 reported identical withdrawal rates of 8.7%. The lowest rate of withdrawal (7.1%) occurred during Week 4.

Table 26

*Course Withdrawals by Week Fall 2011*

	n	%
Week 1	88	11.4
Week 2	72	9.3
Week 3	78	10.1
Week 4	55	7.1
Week 5	73	9.4
Week 6	53	6.9
Week 7	67	8.7
Week 8	66	8.5
Week 9	62	8.0
Week 10	67	8.7
Week 11	92	11.9
Totals	773	100

Table 27 reviews the frequencies and percentages of total course enrollments and withdrawals by students who withdrew during the Fall of 2011. A total of 490 students comprised the 773 course withdrawals and 1,563 of the course enrollments. Total course enrollments by students who eventually withdrew during the Fall of 2011 ranged from 1 to 11 ( $M = 3.18$ ,  $SD = 1.79$ ). Total course withdrawals during the Fall of 2011 ranged from 1 to 5. The

greatest number (62.9%) of students reported withdrawing from one online course. No students reported withdrawing from six or more courses.

Table 27

*Course Enrollment Activity by Withdrawn Students Fall 2011*

	Courses Enrolled <i>n</i> (%)	Courses Withdrawn <i>n</i> (%)
One	110 (22.4)	308 (62.9)
Two	99 (20.2)	106 (21.6)
Three	51 (10.4)	54 (11.0)
Four	122 (24.9)	21 (4.3)
Five	68 (13.9)	1 (0.2)
Six	24 (4.9)	0 (0.0)
Seven	8 (1.6)	0 (0.0)
Eight	1 (0.2)	0 (0.0)
Nine	5 (1.0)	0 (0.0)
Ten	1 (.2)	0 (0.0)
Eleven	1 (.2)	0 (0.0)
Totals	490	490

The results of a chi-square test of independence indicated a statistically significant association,  $\chi^2(40) = 33.820, p < .05$ , between course enrollments and course withdrawals. The results indicate that the probability for withdrawing is greater as the number of online courses a student enrolls in increases. As illustrated in Table 28, the greatest number of courses that a student was enrolled in was 11 and the greatest number of courses that a student withdrew from was 5. The student who elected to enroll in 11 courses eventually withdrew from 4 courses. Additionally, the student who elected to enroll in 10 courses eventually withdrew from two courses. Of the 110 students who elected to enroll in 1 online course, 100% of those students eventually withdrew from the online course.

Table 28

*Course Withdrawals by Course Enrollment Fall 2011*

Course Enrollment		Course Withdrawals				
		1	2	3	4	5
1	Observed	110	0	0	0	0
	Expected	69.1	23.8	12.1	4.7	0.2
2	Observed	110	34	0	0	0
	Expected	69.1	21.4	10.9	4.2	0.2
3	Observed	27	18	6	0	0
	Expected	32.1	11.0	5.6	2.2	0.1
4	Observed	61	31	24	6	0
	Expected	76.7	26.4	13.4	5.2	0.2
5	Observed	35	12	16	5	0
	Expected	42.7	14.7	7.5	2.9	0.1
6	Observed	6	10	4	4	0
	Expected	15.1	5.2	2.6	1.0	0.0
7	Observed	1	0	2	5	0
	Expected	5.0	1.7	0.9	0.3	0.0
8	Observed	1	0	0	0	0
	Expected	0.6	0.2	0.1	0.0	0.0
9	Observed	2	0	2	0	1
	Expected	3.1	1.1	0.6	0.2	0.0
10	Observed	0	1	0	0	0
	Expected	0.6	0.2	0.1	0.0	0.0
11	Observed	0	0	0	1	0
	Expected	0.6	0.2	0.1	0.0	0.0

## Research Question 5

What are the self-reported reasons for student non-completion of online community college courses? Question 13 consisted of qualitative responses from the survey instrument. Of the 53 students who completed the survey, 7.95% ( $n = 39$ ) elected to answer the open-ended question. Narrative responses from the survey participants were, in the researcher's opinion, the best method for explaining the perceptions of the students from the open-ended question. Common themes emerged as the researcher analyzed the individual responses. Table 29 summarizes the common themes identified from the respondents' narrative responses.

Table 29

*Summarized Themes from Research Question 5*

Self-reported reasons for student non-completion of online community college courses	Average %
Financial Aid/ Payment for Course or Supplies	12%
Time Management	20%
Job Responsibilities	12%
Course Design	5%
Instructor Communication/Lack of Communication	16%
Computer Access	10%
Family	5%
Dropped by Instructor	20%

The initial reason for a qualitative question to be incorporated into the research was to better analyze the quantitative responses. Although the qualitative portion reveals comments that coincide with the survey items, it also reveals more depth to the actual reasons behind some of the student withdrawals. Time management issues were reported by 20% of the respondents. A couple of specific examples from the respondents include the following:

“More work that I expected. Thought it would be easier online.”

“Not enough time at home to devote to course.”

“The course was very time consuming. Course was reading intensive.”

“Dropped by instructor” was reported by 20% of the respondents. The policy of the research site specifies that students are required to attend class regularly. Specific attendance requirements for each course are determined and enforced by the instructor and must be presented in writing via the course syllabus at the beginning of the term. Additionally, if the student misses two consecutive weeks of work or fails to submit assignments in a timely manner, the student may be dropped from the roll with a “W” being recorded on their transcript ( College, 2011). A couple of examples are included:

“I was dropped by the instructor”

“I don’t know. I got dropped.”

“I didn’t log in for awhile and the course no longer showed up on Blackboard.”

Lack of communication was another theme that was reported by 16% of the respondents. A couple of examples include the following:

“Miscommunication between the assignments and lack of communication with the instructor.”

“Couldn’t get a response from the instructor.”

“Communication issues with the instructor. I emailed her several times and the only response I received was to verify that I was dropping the class.”

A total of 10% of students reported course design and family as reasons for withdrawal. A couple of examples included:

“Family illness.”

“The information given was not organized in a manner that an online student could understand.”

#### Research Question 6

What is the level of satisfaction by learners of the interactive LMS tools in the online course? This research question was answered through participants’ responses to survey question 14. This question attempted to identify the level of satisfaction with the learning management system tools that are currently available for instructor utilization. The questions on the questionnaire under the category titled *LMS Tools*.

Table 30 reviews percentage of student satisfaction with tools available for use in the LMS. Students who withdrew from online courses during Fall 2011 reported *Did Not Use this Tool* with the highest percentage on seven out of the nine tools available. The LMS tool, e-mail, received a *Very Satisfied* rating of 22.6%, the highest rating in that category for the nine tools. Table 27 also indicates that 0% of students who withdrew were not dissatisfied with four of the nine tools available. Four of the nine tools--podcasts, journals, video clips, and clips--received a 7.5% under *Very Satisfied*. Each of the nine tools received a rating under *Very Dissatisfied*, with e-mail having the highest percentage (9.4%).

Table 30

*Student Level of Satisfaction with LMS Tools Fall 2011*

	Very Satisfied (n = 44)	Satisfied (n = 43)	Neutral (n = 44)	Dissatisfied (n = 44)	Very Dissatisfied (n = 44)	Did Not Use this Tool (n = 44)
Podcasts	7.5%	15.1%	11.3%	0.0%	1.9%	47.2%
Discussion Board	13.2%	26.4%	15.1%	5.7%	1.9%	18.9%
Blogs	9.4%	13.2%	12.3%	1.9%	1.9%	43.4%
E-mail	22.6%	22.6%	9.4%	5.7%	9.4%	13.2%
Journals	7.5%	11.3%	13.2%	1.9%	1.9%	47.2%
Video Clips	7.5%	15.1%	18.9%	0.0%	5.7%	35.8%
Audio Clips	7.5%	15.1%	18.9%	0.0%	5.7%	35.8%
Wimba Pronto	5.7%	9.4%	11.3%	1.9%	3.8%	50.9%
Wimba Classroom	5.7%	7.5%	13.2%	0.0%	5.7%	52.8%

Research Question 7

What is the perception of student engagement prior to withdrawing from an online community college course? This research question was answered through participants' responses to survey question 15 and 16. These questions attempted to determine the level of student social

interaction with fellow classmates and the instructor via course content and LMS tools. The questions were located on the questionnaire under the category titled *Social Interaction*.

Table 31 reviews the percentage of student perceptions of LMS tools being an effective means of communication in an online course. Of the 53 students who participated in the survey, 41 elected to rate their level of satisfaction with the LMS tools as a means of communication. Four of the six tools received the highest percentage under *Did Not Use this Tool*, indicating that communication primarily took place via two of the six communication tools. Primarily, communication took place via e-mail or discussion board both of which received the highest ranking under *Agree*. Of the six tools, e-mail received the highest ranking (18.9%) of students strongly agreeing that it was an effective means of communication. All of the tools, with the exception of Journals, received a percentage of 3.8 under *Disagree*. Of the students who participated in the survey, only 9.4% reported e-mail as *Did Not Use this Tool*, which indicates it was one of the primary methods of communication in the online course prior to the student withdrawing.

Table 31

*Rating of LMS Tools as Effective Means of Communication Fall 2011*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Did Not Use This Tool
E-mail	18.9%	20.8%	15.1%	3.8%	9.4%	9.4%
Wimba Classroom	0%	3.8%	13.2%	3.8%	3.8%	52.8%
Wimba Pronto	0%	5.7%	13.2%	3.8%	5.7%	49.1%
Discussion Board	7.5%	22.6%	18.9%	3.8%	3.8%	20.8%
Blogs	3.8%	7.5%	11.3%	3.8%	3.8%	47.2%
Journals	1.9%	7.5%	13.2%	1.9%	3.8%	49.1%

Table 32 reviews the percentages of student perceptions of social interaction and engagement in an online community college course prior to withdrawing. Question 16 received a myriad of responses. “My instructor was prompt in responding to emails and phone calls” received the highest ranking (17.0%) under *Strongly Agree*. Additionally, “Even though I was not in a physical classroom, I still felt like I was a part of a learning group or that I belonged” received the highest ranking (76.4%) under *Strongly Disagree*, indicating that the majority of the students ( $n = 42$ ) who responded to the survey did not believe that they belonged to a learning group or community in their online course. In relation to this question, 90.2% of students who responded to the survey were either neutral or disagreed with the statement “I was able to develop friendships in this course,” and only 9.8% of students either *Agreed* or *Strongly Agreed* that they had developed an online friendship prior to withdrawing from the course.

Table 32

*Social Interaction Fall 2011*

	n	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Even though I was not in a physical classroom, I still felt like I was a part of a learning group or that I belonged.	42	9.4%	20.8%	13.2%	9.4%	76.4%
The online course allowed for social interaction.	41	3.8%	24.5%	24.5%	5.7%	18.9%
The online course allowed me to get to know my fellow classmates.	41	3.8%	13.2%	20.8%	20.8%	18.9%
The online course allowed me to get to know my instructor.	41	7.5%	15.1%	26.4%	13.2%	15.1%
My instructor was prompt in responding to emails and/or phone calls.	40	17.0%	15.1%	24.5%	7.5%	11.3%

(table continues)

	n	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I was able to develop friendships in this course.	41	3.8%	5.7%	24.5%	18.9%	24.5%
I was able to communicate effectively in this online course.	41	7.5%	13.2%	28.3%	15.1%	13.2%
The online discussions allowed me to build relationships with my fellow classmates and instructors.	41	5.7%	7.5%	28.3%	18.9%	17.0%
The online course allowed me to build relationships based on the sharing and exchange of ideas.	41	3.8%	11.3%	32.1%	11.3%	18.9%
Social interaction in the online course allowed me to convey my thoughts and feelings.	41	3.8%	11.3%	32.1%	9.4%	20.8%
I communicate with my online classmates even when the assignment does not require it.	41	1.9%	11.3%	18.9%	18.9%	26.4%
Online communications with my classmates helped me with the learning process in online courses.	40	1.9%	11.3%	22.6%	20.8%	18.9%
Online communications with my instructor helped with the learning process in the online course.	40	11.3%	11.3%	24.5%	11.3%	17.0%

### Summary

This chapter presented the findings of the survey administered to 490 students who had withdrawn from an online community college course. In total, 53 participated in the survey. The data from the survey, along with data from the SIS, were used to answer the seven research questions that guided this study. The items on the questionnaire were divided into four categories including student characteristics, online experience, LMS tools, and social interaction. In this section the results of descriptive statistics, chi-square analyses, and survey response analysis were presented. In the next chapter, a discussion of the findings and implications for future practice is presented.

## CHAPTER V

### FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

#### Introduction

This study surveyed community college students who had recently withdrawn from online courses at an eastern central community college. The request to participate in the study was sent to 490 potential participants, of those 53 agreed to participate in the study, signed the consent form, and completed the survey. Additional data obtained from the college's SIS database provided demographic and course activity data for all students enrolled in an online course during the research period. The results of the survey instrument, as well as the SIS data, were analyzed and used to answer the seven research questions of the study. This chapter discusses the findings and conclusions of the study and provides recommendations for future research.

#### Results, Conclusions, and Discussion

Results of this study indicated that a total of 490 unduplicated students comprised the 773 course withdrawals that occurred during the Fall 2011 online semester. The highest percentage of course withdrawals was comprised by African Americans (62.2%) female (81.8%) students between the ages of 18-23 (42.0%). Additionally, the highest percentage of surveyed withdrawn students indicated that they were single (49.1%) with no children (28.3%) and were not employed (39.6%) due to a full-time college enrollment status (71.7%). No statistically

significant associations were indicated. The findings in this study indicate that online community college learners hold similar attributes to students who attend traditional courses at 4-year institutions in that they are between the ages of 18-23, attend school full time, and are not necessarily constricted by environmental characteristics such as spouses, children, or job obligations. These findings are contradictory to previous research conducted by Kember (1989), which stated that online learners were more likely to be mature adults who were taking online courses out of the need to integrate the demands of family, work, and social commitments.

Of the 48 students who elected to participate in this study, 22.6% reported Fall 2011 as their first online experience. These findings are consistent with previous research (Allen & Seaman, 2010), which has reported online learning as one of the fastest growing forms of instruction with an average yearly growth rate of 21%. Yet, attrition rates are estimated to be 20-50% higher than traditional courses (Diaz, 2009). Kember (1989), revisiting Tinto's (1975, 1987) Longitudinal Model of Individual Departure, proposed that previous online educational experience as well as depths of commitment to completion were indicators of student attrition. Influenced by Bandura's (1986) theory of self-efficacy, Knowles and Kirkman (2007) acknowledge that students must log into the online classroom as a solitary initiative and then remain active throughout the duration of the course. Students with a higher sense of self-efficacy will more likely disallow external variables to prevent them from persisting in online endeavors. However, as previously reported, the findings in this study indicate that primarily the students who elected to withdraw were not characterized as having the same external variables as cited by Kember (1989) to prevent them from persisting.

A statistically significant association was indicated between prior online course experience and prior online attrition. The findings are consistent with previous research studies

(Kember 1989) in which students who have previously enrolled and withdrawn from an online course are more likely to withdraw from future online courses. Additionally, based on the findings, it can be concluded that for the students who reported Fall 2011 as their first time as having enrolled in an online course, external variables such as family and job obligations were not primary factors for non-persistence, and other factors influenced their decision to withdraw.

When examining whether online community college students withdrew at a higher rate from specific courses, results showed that 17.1% of respondents reported withdrawing from English Composition, 11.4% of respondents reported withdrawing from Chemistry, and 7.6% of respondents reported withdrawing from Introduction to Philosophy. This may indicate that students withdraw from subjects they find more difficult or that do not fit well with their commitment or abilities. Prior research has found that course content including the difficulty, or perceived difficulty, of the subject matter as well as the abilities and commitment of the student are considerations for student attrition (Diaz, 2009; Kember, 1989).

When examining whether the length of time enrolled in an online community college course decreased the likelihood of attrition, the greatest number of students (11.9%) reported withdrawing during the last available week. The second greatest number (11.4%) of course withdrawals was recorded during Week 1. Weeks 2 and 5 reported similar withdrawal rates of less than 9.5%, which were also the fourth and fifth highest weeks of withdrawal. These percentages indicate that the length of time enrolled in an online community college course does not decrease the likelihood of student attrition, which correlates with other research (Diaz,2009), showing that students enrolled into full-term (16-18 weeks) online courses may fall into a lapse of concentration due to time management or time constraints. This may be more problematic in an online setting where a lack of face-to-face contact may exacerbate inattention to class

participation and/or activity, resulting in a student's need to withdraw by set deadlines to prevent receiving a failing grade for the course even though they have remained enrolled for an extended time.

When looking at the self-reported reasons for student non-completion of an online community college course, comments were categorized into eight themes as identified by the investigator. One of the most prevalent reoccurring themes that emerged was related to communication. Approximately 20% of participants acknowledge communication or lack thereof as a factor for withdrawal. This correlates with item 15 from the survey instrument, which revealed that only 3.8% of participants strongly agreed that the online course allowed for social interaction, 7.5% strongly agreed that the online course allowed them to effectively communicate, and 5.7% strongly agreed that they were able to develop relationships with their fellow classmates and instructors. While 32.1% of participants strongly agreed or agreed that their instructor was prompt in responding to e-mails and phone calls, effective communication in an online course is vital for student retention. This fact was also evident from previous research, which found that the communication and interactions that take place between the learners and between the learner and the instructor, is at the heart of the learning experience and is one of the defining characteristics of successful learning in both traditional and online learning environments (Baker, 2010). Furthermore, retention theorists Spady (1970), Bean (1980), and Tinto (2006) have advocated social interactions as a primary factor for student retention in a face-to-face course setting and Kember (1989) in the online environment.

Time management, family, and job responsibilities were cited by 37% of participants as the primary reason for withdrawal. This relates directly to the type of learners who elect to study online. Previous research by Kember (1980) has identified personal responsibilities including

children, finances, and social commitments as influencers of a student's ability to effectively learn online. Kember indicated that these circumstances did not relate to the typical aged undergraduate student. However, during the Fall of 2011 online semester, 1,548 of the course enrollments were comprised of individuals between the ages of 18-23. Additionally, from that enrollment body, only 206 elected to withdraw from one or more of the online courses in which they were enrolled. Furthermore, 49.1% of the participants indicated that they were single and 28.3% of the participants indicated that they did not have any minor children residing in their home during the research period. Moreover, the majority of students 39.6% ( $n = 21$ ) who completed the survey, indicated that they were not currently employed. This may be in relation to the fact that 71.7% ( $n = 38$ ) indicated that they were attending college on a full-time basis. The data findings are contradictory to Kember's Longitudinal Model of Drop-Out from Distance Education and further demonstrate that previous retention models do not take into account the changing demographics of the current online learner.

The level of satisfaction by learners of the interactive learning management system tools that are currently available for instructor utilization in online courses was examined in this study. Effectiveness has been defined as having a positive impact on student learning (Feiman-Nemser, 2001). Determining impact was outside the scope of the research; therefore, effectiveness was determined by the perceptions of respondents as cited by their choice of response.

Findings illustrate that *Did Not Use This Tool* had the highest percentage, which ranged from 35.8% to 52.8% on seven of the nine tools available. E-mail was the only tool to receive the highest rating (22.6%) under *Very Satisfied*, which was only one of three tools to receive a rating above 9.4% under *Very Satisfied*. All of the tools, while low, received ratings under *Very*

*Dissatisfied*, indicating that students were either very dissatisfied with their limited use of the tool or how the tool was utilized in the course.

With the exception of e-mail, these percentages indicate that participants were not satisfied with their use of the LMS tools. Furthermore, these findings could indicate that either there is a lack of utilization on the instructor's part to incorporate interactive elements into the online course or that some students lack technical skill or working knowledge of the available tools. The lack of utilization may be a direct result of the fact that online instructors must not only be disseminators of knowledge, but must also possess the basic technical skills to be course designers as well. To do so, faculty must learn and stay current on the technology that can be utilized to create online courses in a way that will impact student learning. The lack of use of eight of the nine LMS tools indicates that instructors may not possess the necessary training needed to utilize interactive elements that can produce successful courses in which interaction is engaging and productive (Blau & Gorsky, 2009; Moffett, 2004). Because e-mail received fair rankings under *Very Satisfied* and *Satisfied*, it can be assumed that instructors utilize this tool more due to ease of use and familiarity, because e-mail is often the current preferred method of communication with colleagues and students at institutes of higher learning. Failure to utilize the tools on the students' part may contribute to the students' inability to complete required assignments or participate in class activities. Inability or lack of use of interactive LMS tools directly contributed to student attrition and suggest that interaction through the use of these tools does not just happen, but rather has to be designed, with a working understanding, into the course.

Students' perceptions of engagement in the online community college course prior to withdrawing were also examined. Social interaction in a virtual course can be accomplished

through the use of communication tools available in the LMS. Wimba Classroom (52.8%), Wimba Pronto (49.1%), Journals (49.1%), and Blogs (47.2%) received the highest percentages under *Did Not Use This Tool*. None of the six tools received a ranking higher than 18.9% under *Strongly Agree*, and only Discussion Board (22.6%) and E-mail (20.8%) received a ranking over 20% under *Agree*. E-mail (18.9%) received an 11.4% higher ranking under *Strongly Agree* as compared to the other five LMS tools and a rating of 20.8% under *Agree*, which suggests that e-mail was an effective means of communication in the online community college course. Moore's (1997) Transactional Distance Theory states that geographical separation does not impact the quality of teaching and learning, rather it is the social interactions that take place within it. This theory has been used by prior researchers to explain why the use of electronic communication tools might increase the social interactions that take place in the online environment (Baker, 2010; Chen & Willis, 1998; Gorsky & Caspi, 2005).

Social transactions among participants allow members to see themselves as legitimate members of the online learning community (Lee et al., 2004); yet in this study 76.4% of respondents strongly disagreed with the statement, "Even though I was not in a physical classroom, I still felt like I was a part of a learning group of which I belonged." In relation, 90.2% gave a rating of neutral or below to the statement "I was able to develop friendships in this course." Furthermore, only 3.8% of participants strongly agreed to the statement "The online course allowed for social interaction." Social interaction in an online course should be considered a prime component of learning (Maeoff, 2003). Gaillie (2005) reported that increased social interaction had significant effects on student retention, and that increased social presence could decrease student attrition in the online environment. Additionally, Gosmire et al. (2009) suggested that students who feel disconnected in an online course due to the lack of face-to-face

time with the instructor and fellow classmates may benefit from use of LMS communication tools. This study's findings suggest that lack of social interaction is a factor for student attrition in an online community college course.

### Implications

The diverse population of community college students continues to expand and evolve almost as quickly as the growth of online learning. With attrition rates 20-50% higher from online courses than traditional courses and community college retention rates lower than 4-year institutions, it is important to understand factors that impact student attrition.

Community colleges need to employ online instructors who desire to teach online courses and who have the necessary technical skills to design and facilitate the online course. Administrators will need to provide the necessary support, resources, and training to instructors in order for them to conduct a quality online course that incorporates and encourages social interactions. The literature review in this study covered various means and methods of communication in the online environment: e-mail, blogs, journals, discussion board, Wimba Classroom, and Wimba Pronto. Instructors will need to seek out means to stay current on the use and emergence of the varied LMS tools.

Slightly more than a quarter of the surveyed students responded that the online course enrolled into and withdrawn from during Fall 2011 was their first online learning experience. This implies that some students may not be prepared to learn in an online environment or lack the self-motivation and time management skills required to be successful in an online course. Administrators will need to provide students with an orientation to online courses as is done for traditional class settings. The orientation can prepare students on what to expect in an online

course, study skills, and techniques for time management. Additionally, because several students reported lack of communication as a reason for attrition, administrators will need to implement a mandatory timeframe in which instructors must respond to student inquiries. Instructors provide content expertise during online learning; therefore, instructors will need to become integrated members of the online course in which they participate in course activities such as discussion boards, journals, and blogs. Increasing the interactivity and, therefore, the communication can lead to an enhanced level of motivation and learning.

Results from this study imply that the diverse student population and varied academic goals of online community college students do not fit into previously theorized retention models. With consideration to Kember’s (1989) research, these findings suggest the emergence of a new model for online community college attrition, which can be formulated into two broad categories: the student and the institution. Upon further dissection, smaller subsets, as shown in Table 33, begin to emerge. These subsets suggest a direct or indirect impact on student inability to persist in an online community college course.

Table 33

*Summarized Subsets for Online Community College Attrition*

The Student	The Institution
Demographics	Course Design
Environmental Characteristics	Technical Support
Institutional Fit	Student Support Services
Academic Goals and Abilities	Instructor Communication
Motivation	Instructor Motivation
Experience	Retention Efforts
Technical Skill	Instructor Technical Skill or LMS Training

This model, while in its infancy stage, contributes to previous research conducted on attrition and could be utilized by 2-year institutions for its articulation on the diverse student body and institutional design of a community college, which currently has limited research analyzing factors for online attrition.

### Limitations

Identifying limitations provides researchers with the opportunity to identify possible weaknesses related to the study (Creswell, 2003). The following are limitations of this study.

1. This study took place during the length of one online academic term from August 2011 to December 2011.

2. Only 53 students elected to participate in the survey therefore the sample is small. Small sample sizes impact any statistical calculations conducted.

3. The participants in this study were individuals who withdrew from at least one online course at an eastern central Mississippi community college; therefore, the results cannot be generalized to all online community college students.

### Recommendations for Further Research

Based on the results of this study and a review of the related literature, the following recommendations are made for further research and practice.

1. Additional research studies should be conducted at the community college level to thoroughly investigate the elements identified as factors for student attrition from online courses. Increasing the sample size would allow for more in-depth statistical calculations such as ANOVA and independent  $t$  tests, which could bring more statistically significant conclusions.

2. Additional research studies should be conducted at the community college level designed to compare the previous attrition theories to the implementation of the proposed model for attrition from online community college courses.

3. Additional research studies should be conducted designed to compare student attrition from online community college courses as compared to the utilization of learning management tools which have been identified to promote communication.

### Summary

This chapter presented a discussion of the data analysis and presented recommendations based upon the results of descriptive statistics, chi-square analyses, and survey response analysis of students who had withdrawn from an online course at an eastern, central community college. Discussions and recommendations made in this chapter were based on the findings in this study, which were taken from the data collected from 53 survey respondents and the data of all students enrolled in an online course as identified by the research college's student information system database.

A review of the literature revealed that distance education is not a new phenomenon, but rather it is a means of learning that has evolved based on the technologies available at the time. More and more learners are seeking flexibility in learning structure to accommodate other responsibilities that may hinder them from learning in the traditional classroom setting. However, previous research has concluded that attrition from online courses is 20-50% higher than traditional face-to-face courses (Ali & Leeds, 2009; Angelina et al., 2007; Martinez, 2003; Tinto, 2006; Yukselturk & Inan, 2006). Over the decades, several retention models have been developed to explain factors that inhibit students from persisting in their educational courses

(Bean, 1980; Kember, 1989; Spady, 1970; Tinto, 1975, 1980, 2006), but these theories failed to adequately reflect factors for student attrition from online community college courses.

The purpose of this study was to investigate factors for student attrition from online community college courses. By using a convergence model of five retention theories and a review of the literature four broad areas of importance in relation to student attrition were revealed: student characteristics, online experience, learning management system tools, and social interaction.

Participants demonstrated characteristics similar to those of students enrolled in traditional 4-year institutions in that they are between the ages of 18-23, single, childless, and unemployed due to full-time college enrollment status. These characteristics are not consistent with previous retention models related to nontraditional students, which is how community college learners are traditionally classified. The participants responded negatively to the communications and interactions, or lack thereof, which occurred within the course and with the instructor and fellow classmates. Additionally, several themes emerged from the self-reported reasons for attrition. Based on the findings from this study, three recommendations were made for further research.

Distance education is not a new phenomenon, but rather one that has evolved with the technologies available. Many retention models exist to explain attrition of nontraditional learners, nontraditional online learners, and traditional, 4-year learners, yet little data exist to explain attrition from online community college courses. These findings conclude that online community college learners exhibit similar characteristics of traditional learners and should be empowered with the same tools and resources to be as successful in an online course as they would in a traditional campus course.

## REFERENCES

- Alexander, C., Kohnke, M., & Naginery, A. (n.d.). *Undergraduate and graduate retention two concepts, one outcome*. Retrieved April 6, 2011, from California Lutheran University: [http://www.callutheran.edu/fact\\_book/documents/UndergraduateandGraduateRetention\\_TwoConceptsOneOutcome.pdf](http://www.callutheran.edu/fact_book/documents/UndergraduateandGraduateRetention_TwoConceptsOneOutcome.pdf)
- Ali, R., & Leeds, E. (2009). The impact of face-to-face orientation on online retention: A pilot study *Online Journal of Distance Learning Administration*, Volume XII, Winter 2009.
- Allen, I. E., & Seaman, J. (2010). *Learning on Demand: Online Education in the United States*. Babson Park, MA: Babson Survey Research Group. Retrieved April 5, 2010, from [http://www.sloan-c.org/publications/survey/pdf/learning\\_demand.pdf](http://www.sloan-c.org/publications/survey/pdf/learning_demand.pdf)
- Allen, I. E., & Seaman, J. (2007). Online nation: Five years of growth in online learning. Babson Park, MA: Babson Survey Research Group. Retrieved April 1, 2010, from [http://www.sloan-c.org/publications/survey/pdf/online\\_nation.pdf](http://www.sloan-c.org/publications/survey/pdf/online_nation.pdf)
- Andres, L., & Carpenter, S. (1997). Today's higher education students: Issues of admission, retention, transfer, and attrition in relation to changing student demographic. Center for Policies Studies in Education University of British Columbia. Retrieved April 5, 2011, from <http://ubc.academia.edu/LesleyAndres/Papers/624779>
- Angelino, L. M., Williams, F. K., & Natvig, D. (2007). Strategies to engage online students and reduce attrition rates. *The Journal of Educators Online*, 4(2), 1-14.
- Andres, L., & Carpenter, S. (1997). *Today's higher education students: Issues of admission, retention, transfer, and attrition in relation to changing student demographics*. Retrieved April 6, 2011, from the University of British Columbia: <http://www.bccat.bc.ca/pubs/today.pdf>
- Anderson, T. (2009). A rose by any other name: Still distance education. *Journal of Distance Education*, 23(3), 111-116.
- Baker, C. (2010). The impact of instructor immediacy and presence for online student affective learning, cognition, and motivation. *The Journal of Educators Online*, 7(1).
- Baker's Guide LLC. (2010). Distance education timeline. Retrieved December 1, 2010, from *A Baker's Guide to Christian Distance Education*: [http://www.bakersguide.com/Distance\\_Education\\_Timeline/](http://www.bakersguide.com/Distance_Education_Timeline/)

- Bean, J. (1980). Dropouts and turnover: The synthesis and test of causal model of student attrition. *Research in Higher Education*, 12, 155-187.
- Beam, M. (2005). *Survey design and process*. Retrieved online February 14, 2011, from Mt. San Antonio College: <http://www.mtsac.edu/administration/research/pdf/tips/SurveyDesignandProcess.pdf>
- Blau, I., & Gorsky, P. (2009). Online teaching effectiveness: A tale of two instructors. *International Review of Research in Open and Distance Learning*, 10(3), 1-19.
- Bowman, L. (2001). Social interaction in the online classroom. *Teachers.net Gazette*, 2(7), 2-7.
- Brindley, J., Walti, C., & Blaschke, L. (2009). Creating effective collaborative learning groups in an online environment. *International Review of Research in Open and Distance Learning*, 10(3), 1-18.
- CANnect.org. (2010). *Accessible video and audio*. Retrieved December 30, 2010, from CANnect: <http://sloanconsortium.org/cannect/projectone/advice/video-audio.php>
- Chandler, D. (2000). *Who created the internet? It's a tangled web*. Retrieved December 24, 2010, from Hearst Seattle Incorporated, LLC: <http://www.seattlepi.com/business/nett20.shtml>
- Chen, Y., & Willits, F. (1998). A path analysis of the concepts in Moore's theory of transactional distance in a videoconferencing learning environment. *Journal of Distance Education*, 13(2), 51-65.
- Coates, H. (2005, April). The value of student engagement for higher education quality assurance. *Quality in Higher Education*, 11(1), 26-36.
- Collins-Brown, E. (2005). *Multimedia in online courses: Bells and whistles or solutions?* Retrieved December 30, 2010, from The Board of Regents of the University of Wisconsin System: <http://sloanconsortium.org/cannect/projectone/advice/video-audio.php>
- Conway, R. E. (2005). Strategies for enhancing student social interaction and immediacy in online courses. *Business Communication Quarterly*, 68(1), 23-35.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). San Francisco: Jossey-Bass.
- Dabbagh, N. (2007). The online learner: Characteristics and pedagogical implications. *Contemporary Issues in Technology and Teacher Education*, 7(3), 217-226.
- Derby, D. C. (2004). An orientation course and community college retention. *Community College Journal of Research & Practice*, 763-773.

- Díaz, A., & Bla'zquez, E. (2009). Are the functions of teachers in e-learning and face-to-face learning environments really different? *Educational Technology & Society*, 12, 331-343.
- Erlin, N. Y. (2008). Overview on agent applications to support collaborative learning social interaction. *US-China Education Review*, 5(1).
- Feiman-Nemser, S. (2001). From preparation of practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013-1055.
- Fishetti, M. (2009). *Facts about the web's creation: Everything you ever wanted to know about the web's first days*. Retrieved April 7, 2011 from Scientific American: <http://www.scientificamerican.com/article.cfm?id=facts-about-the-webs-creation>
- Fisk, D., & Fisk, R. (2008). Predictors of first year student retention in the community college. *Community College Review*, 36, 68-88.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research* (6th ed.). White Plains, NY: Longman.
- Gaille, K. (2005). Student attrition before and after modifications in distance course delivery. *Studies in Learning, Evaluation, Innovation, and Development*, 2(3), 69-76.
- Gosmire, D., Morrison, M., & Van Osdel, J. (2009). Perceptions of social interactions in online courses. *MERLOT Journal of Online Learning and Teaching*, 5(4), 609-618.
- Hayden, R., & Fagan, W. (1995). Social relationships of literacy. *The Reading Teacher*, 49(3), 260-262.
- Halsne, A., & Gretta, L. (2002). Online versus traditionally-delivered instruction: A descriptive study of learning characteristics in a community college setting. *Online Journal of Distance Administration* V(1). Retrieved April 14, 2011 from <http://www.westga.edu/~distance/ojdla/spring51/halsne51.html>
- Hartsell, T., & Yuen, S. (2006). Video streaming in online learning. *AACE Journal*, 14(1), 31-43. Retrieved from [http://digitalvideooverview.weebly.com/uploads/2/0/1/9/2019204/article\\_6152.pdf](http://digitalvideooverview.weebly.com/uploads/2/0/1/9/2019204/article_6152.pdf)
- Herbert, M. (2006). Staying the course: A study in online student satisfaction and retention. Retrieved January 12, 2011, from *Online Journal of Distance Learning Administration*: <http://www.westga.edu/~distance/ojdla/winter94/herbert94.htm>
- Hill, J. (2000, October 10). *Online learning communities: If you build them, will they stay?* Retrieved January 10, 2011, from ITFORUM: <http://it.coe.uga.edu/itforum/paper46/paper46.htm>
- Hinkle, L. (2009a, November 29). *Distance education history: The early years of distance learning*. Retrieved December 1, 2010, from BrightHub.com: <http://www.brighthub.com/education/online-learning/articles/24404.aspx>

- Hinkle, L. (2009b, November 29). *The history of distance learning*. Retrieved December 1, 2010, from BrightHub.com: <http://www.brighthub.com/education/online-learning/articles/24126.aspx>
- Hinkle, L. (2009c, December 10). *The history of technology in education and its effect on distance learning from 1960 to 1990*. Retrieved December 1, 2010, from BrightHub: <http://www.brighthub.com/education/online-learning/articles/25757.aspx>
- Howell, S. W. (2003). Thirty-two trends affecting distance education: An informed foundation for strategic planning. *Online Journal of Distance Learning Administration*, 4(3).
- Hughes, T. (2004). *Human built world: How to think about technology and culture*. Chicago: The University of Chicago Press.
- Hunga, M. C. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers and Education*, 55(3), 1080-1090.
- Jacobs, W. (2007). Online discussion in a hybrid information literacy credit course. *Education Libraries*, 30(2), 18-26.
- Kaya, T. (2010, November 16). *Enrollment in online courses increases at the highest rate ever*. Retrieved November 20, 2010, from The Chronicle of Higher Education: [www.chronicle.com](http://www.chronicle.com)
- Kim, K. (2002). Exploring the meaning of nontraditional at the community college. *Community College Review*, 30(1), 74-89.
- Klass, B. (2005). Streaming media in higher education: Possibilities and pitfalls. *Campus Technology*. Retrieved January 22, 2011, from [http://campustechnology.com/articles/2003/05/streaming-media-in-higher-education-possibilities-and-pitfalls.aspx?sc\\_lang=en](http://campustechnology.com/articles/2003/05/streaming-media-in-higher-education-possibilities-and-pitfalls.aspx?sc_lang=en)
- Knowles, E., & Kerkman, D. (2007). An investigation of students attitudes and motivation toward online learning. *Insight: A Collection of Faculty Scholarship*, 2, 70-79.
- Kreigns, K. (2003). Identifying the pitfalls for social interaction in computer-supported collaborative learning environments: A review of the literature. *Computers in Human Behavior*, 19, 335-353.
- Lavolette, E. V. (2010). Comparing synchronous virtual classrooms: Student, instructor and course designer perspectives. *TechTrends*, 54(5), 54-61.
- Lee, J., Bray, M., Carter-Wells, J., Glaeser, B., Ivers, K., Street, C., et al. (2004). Discovering the meaning of community in an online Master's degree program. *Association for Educational Communications and Technology*, Retrieved from ERIC database.
- Lefever, S., & Dal, M. (2007). Online data collection in academic research: Advantages and limitations. *British Journal of Educational Technology*, 38(4), 574-582.

- Leidman, M. B., Piwinsky, M., & McKeague, M. (2010). Faculty-student interaction in the technological age: The perpetual professor? In D. Gibson & B. Dodge (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2010* (pp. 2288-2293).
- Levy, Y. (2007). Comparing dropouts and persistence in e-learning courses. *Computers & Education, 48*(2),185-204.
- Li, C., & Irby, B. (2008). An overview of online education: attractiveness, benefits, challenges, concerns and recommendations. *College Student Journal, 42*(2), 449-58.
- Liu, S., Gomez, J., & Yen, C. (2009). Community college online course retention and final grade: Predictability of social presence. *Journal of Interactive Online Learning, 8*(2), 165-182.
- Mandernach, J. (2009). Effect of instructor-personalized multimedia in the online classroom. *International Review of Research in Open and Distance Learning, 10*(3), 1-19.
- Martin, F. (2008). Blackboard as the learning management system of a computer literacy course. *Journal of Online Learning and Teaching, 4*(2).
- Martinez, M. (2003). High attrition rates in e-learning: Challenges, predictors, and solutions. *The eLearning Developers' Journal*.
- McGivney, V. (2004). Understanding persistence in adult learning. *Open Learning, 19*(1), 34-46.
- Menager-Beeley, R. (2001). *Student success in web based distance learning: Measuring motivation to identify at risk students and improve retention in online classes*. Proceeding of the World Conference on the WWW and Internet, Orlando, FL.
- Meridian Community College. (2011) *Meridian Community College Catalog*. Retrieved December 31, 2011, from Meridian Community College: <http://www.mcc.cc.ms.us/aboutmcc/catalog.htm>
- Moore, M. (1997). Theory of transactional distance. *Theoretical Principles of Distance Education, 22*-38.
- Moskal, P., Dziuban, C., & Hartman, J. (2010). *Online education and adult learning: New frontiers for teaching practices*. Hershey, New York: Information Science Reference.
- MSN Encarta. (2009). *e-learning*. Retrieved November 2010, 2010, from MSN Encarta Dictionary: [http://encarta.msn.com/dictionary\\_701705852/e-learning.html](http://encarta.msn.com/dictionary_701705852/e-learning.html)
- MSVCC. (2011). *Mississippi virtual community college*. Retrieved February 14, 2011 from: <http://www.msvcc.org/PortalSite/aboutus.htm>

- Muniz-Solari, O., & Coats, C. (2009). Integrated networks: National and international online experiences. *International Review of Research in Open and Distance Learning*, 10(1), 1-19.
- Nagel, L., Blignaut, A., & Cronje, J., (2009). Read-only participants: A case for student communication in online classes. *Interactive Learning Environments*, 17(1), 37-51.
- Orellana, A. (2006). Class size and social interaction in online courses. *Quarterly Review of Distance Education*, 229-248. Retrieved from [http://wps.prenhall.com/wps/media/objects/4512/4621309/Survey\\_Online\\_Class\\_Size.pdf](http://wps.prenhall.com/wps/media/objects/4512/4621309/Survey_Online_Class_Size.pdf)
- Palloff, R., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners*. San Francisco, CA: Jossey-Bass.
- Patterson, B., & McFadden, C. (2009, Summer). Attrition in online and campus degree programs. Retrieved January 12, 2011, from *Online Journal of Distance Learning Administration*: <http://www.westga.edu/~distance/ojdla/summer122/patterson112.html>
- Porter, E. (2009). *Successful online learners are organized*. Retrieved on April 7, 2011, from Bright Hub: <http://www.brighthub.com/education/online-learning/articles/22038.aspx>
- Rasmussen, B. (2007). The first year of college at Utah Valle State: The perceptions, policies, and programs needed to improve the retention of students. Retrieved April 5, 2011, from The University of Utah: <http://www.ed.utah.edu/ELP/Programs/EDD/Capstone/BobRasmussen.pdf>
- Robertson, D. (1999). Professors' perspectives on their teaching: A new construct and developmental model. *Innovative Higher Education*, 23(4), 271-294.
- Roblyer, M., & Wiencke, W. (2003). Design and use of a rubric to assess and encourage interactive qualities in distance courses. *The American Journal of Distance Education*, 17(2), 77-98.
- Shanley, K. (2009). *Ten factors of student retention in online courses*. Retrieved April 19, 2011, from [http://home.comcast.net/~kevin.shanley/files/Shanley\\_2009\\_Final.pdf](http://home.comcast.net/~kevin.shanley/files/Shanley_2009_Final.pdf)
- Shin, M., & Lee, Y. (2009). *Changing the landscape of teacher education via online teaching and learning*. Retrieved March 1, 2010, from [acteonline.org](http://acteonline.org): [acteonline.org](http://acteonline.org)
- Simpson, O. (2004). The impact on retention of interventions to support distance learning students. *Open Learning*, 19(1), 79-95.
- Smith, D. (2009). Online activities for the adult learner. In I. Gibson et al. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 527-530). Chesapeake, VA: AACE.
- Snow, F. (2010). *The myth of poor retention in online learning*. Retrieved April 8, 2011, from: <http://www.compassknowledge.com/march-2010/>

- Social interaction. (2009). *Bing.com*. Bloomsbury Publishing Plc. Retrieved January 10, 2010, from <http://www.bing.com/Dictionary/search?q=define+social+interaction&FORM=DTPDIA&qpvt=what+is+social+interaction>
- Steinmetz, R. *Pre-college demographic and socioeconomic characteristics as predictors of student persistence at Tennessee community colleges*. Ed.D. dissertation, The University of Alabama, United States -- Alabama. Retrieved April 6, 2011, from Dissertations & Theses @ University of Alabama.(Publication No. AAT 3385398).
- StateUniversity. (2011). *Net industried*. Retrieved February 1, 2011, from StateUniversity.com: <http://education.stateuniversity.com/pages/1863/College-Student-Retention.html>
- TechTarget. (2010). *Learning management system*. Retrieved November 1, 2010, from TechTarget: <http://searchcio.techtarget.com/definition/learning-management-system>
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research* 45, 89-125.
- Tinto, V. (1987). *Leaving college*. Chicago: University of Chicago Press.
- Tinto, V. (2006). Research and practice of student retention: What's next? *Journal of College Student Retention: Research, Theory & Practice*, 8(1), 1-20.
- Tyler-Smith, K. (2006). Early attrition among first time elearners: A review of factors that contribute to drop-out, withdrawal and non-completion rates of adult learners undertaking elearning programmes. Retrieved April 8, 2011, from the *Journal of Online Learning and Teaching*: [http://jolt.merlot.org/Vol2\\_No2\\_TylerSmith.htm](http://jolt.merlot.org/Vol2_No2_TylerSmith.htm)
- Toporski, N., & Foley, T. (2004). Design principles for online instruction: A new kind of classroom. *Turkish Online Journal of Distance Education*, 5(1), 1-5.
- Tremblay, R. (2006, June). Best practices and collaborative software in online teaching. *International Review of Research in Open and Distance Learning*, 1-5.
- Truluck, J. (2007). Establishing a mentoring plan for improving retention in online graduate degree programs. *Online Journal of Distance Learning Administration*, 10(1). Retrieved April 18, 2011, from <http://www.westga.edu/~distance/ojdla/spring101/truluck101.htm>
- Van Zanten, R. (2008). The value of lecture podcasting for distance and on-campus students. In *Hello! Where are you in the landscape of educational technology? Proceedings Ascilite Melbourne 2008*. Retrieved January 22, 2011, from <http://www.ascilite.org.au/conferences/melbourne08/procs/vanzanten.pdf>
- Vonderwell, S., & Zachariah, S. (2005). Factors that influence participation in online learning. *Journal of Research on Technology in Education*, 213-230.
- Willging, P., & Johnson, S. (2004). Factors that influence students's decision to dropout of online courses, *Journal of Asynchronous Learning Networks*, 8(4), 105-118.

- Woods, R. H. J. (2002). How much communication is enough in online courses? Exploring the relationship between frequency of instructor-initiated personal e-mail and learners' perceptions of and participation in online learning, *International Journal of Instructional Media*, 29(4), 377-394.
- Yang, H., & Liu, Y. (2007). Building a sense of community. *Journal of Educational Technology Systems*, 36(4), 393-413.
- Yukseltruk, E., & Inan, F. A. (2006). Examining the factors affecting student dropout in an online learning environment. ASHE-ERIC Higher Education Report (ERIC No. ED 494 345).

APPENDIX A  
INFORMED CONSENT AND STUDENT QUESTIONNAIRE

## Informed Consent Form

The University of Alabama  
Informed Consent Statement for Student Withdrawal from Online Community College Courses Survey

You are among 300 community college students who have withdrawn from an online community college course. You are being asked to take part in the Student Withdrawal from Online Community College Courses Survey. This study is being conducted by Krista LeBrun, a doctoral student in the Instructional Technology program at The University of Alabama and is being supervised by Margaret Rice, Ph.D., who is an associate professor in the Instructional Leadership program within the College of Education at The University of Alabama.

This questionnaire is being issued to all students who have withdrawn from an online course this term. In order to participate in this research, you must be 19 years of age or older.

**STUDY PURPOSE:** The purpose of the proposed study is to identify factors for student withdrawal from online community college courses.

**IMPORTANCE OF STUDY:** The information gained from this study will provide a better understanding of why students withdrawal from online community college courses.

**PROCEDURE FOR THE STUDY:** Your participation in this project involves completing this questionnaire. The questionnaire should take you approximately 15 minutes to complete. The questionnaire contains items concerning aspects of student demographics, use of online course tools, social interaction, and factors for withdrawal.

**BENEFIT:** While participation in this research will provide no direct benefit to you immediately, the knowledge gained will benefit education, society, and overall school policy implementation and change for the future.

**RISKS OF TAKING PART IN THE STUDY:** While completing the survey, it is possible that you will be uncomfortable responding to the survey items. Although the survey does ask for some personal information, all responses are confidential. Collected data will be kept in a secure location accessible only to the researcher administering the survey.

**VOLUNTARY NATURE OF STUDY:** Taking part in this study is voluntary. Refusal to participate will involve no penalty. You may skip any question, or stop at any time. There are no known risks or discomforts involved in answering the questionnaire.

**CONFIDENTIALITY:** To assure anonymity of responses, I am asking that you not provide your name or any other identifying information on the questionnaire. Findings from this study will be summarized across participants in reports and will not identify individual students.

**CONTACTS FOR QUESTIONS OR PROBLEMS:** If you have any questions about this study, you may contact me, Krista LeBrun, at 601-481-1389 or by email address [kmllebrun@crimson.ua.edu](mailto:kmllebrun@crimson.ua.edu), or my dissertation committee chair, Dr. Margaret Rice, at 205-348-1165 or at e-mail address [mrice@bamaed.ua.edu](mailto:mrice@bamaed.ua.edu). If you have questions about your rights as a person in a research study, or to obtain information, call Ms. Tanta Myles, the Research Compliance Officer at the University of Alabama, at 205-348-8461 or toll-free at 1-877-820-3066.

Thank you in advance for your participation.

If you understand the statements above, are at least 19 years old, and freely consent to be in this study, please click the NEXT button to begin.

## Student Characteristics

### 1. What is your gender?

- Male
- Female

### 2. Please indicate your ethnic background:

- African American/Black
- Asian/Pacific Islander
- Caucasian/White
- Hispanic
- American-Indian
- Multi-Racial
- Would prefer not to say

### 3. What is your age?

- 18-23
- 24-29
- 30-35
- 36-41
- 42-47
- 48-53
- 54-59
- Age 60 or older

### 4. What is your marital status?

- Single
- Married
- Divorced
- Widow/Widower
- In a committed relationship
- Other

**5. How many children under the age of 18 reside with you?**

- 0
- 1
- 2
- 3
- 4 or more

**6. How many hours a week do you work?**

- I am not currently employed
- 1-15
- 16-30
- 31-45
- 46-60
- More than 60 hours a week

**7. What is your enrollment status at the community college?**

- I am a full-time student
- I am a part-time student

## Online Experience

**8. Was this your first experience with an online course?**

- Yes  
 No

**9. Have you ever withdrawn from an online course prior to withdrawing from this online course?**

- Yes  
 No

**10. How many online courses have you completed in the last two years?**

- 0  
 1  
 2  
 3  
 4  
 5  
 6  
 7 or more

**11. What online course did you withdraw/drop this semester? You may either list the actual course or just list the subject. (i.e. BIO 1113 or Biology)**

**12. When did you stop participating in this online course?**

- Week 1  
 Week 2  
 Week 3  
 Week 4  
 Week 5  
 Week 6  
 Week 7  
 After Week 7

**13. Why did you drop/withdraw from this course?**

## LMS Tools

### 14. Please rate your level of satisfaction with the following LMS tools.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Did not use this tool
Podcasts	<input type="radio"/>					
Discussion Board	<input type="radio"/>					
Blogs	<input type="radio"/>					
E-mail	<input type="radio"/>					
Journals	<input type="radio"/>					
Video Clips	<input type="radio"/>					
Audio Clips	<input type="radio"/>					
Wimba Pronto/Instant Messaging	<input type="radio"/>					
Wimba Classroom	<input type="radio"/>					

## Social Interaction

**15. Please rate how strongly you agree or disagree with the comments about the social interaction that occurred in your online course.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Even though I was not in a physical classroom, I still felt like I was a part of a learning group or that I belonged.	<input type="radio"/>				
The online course allowed for social interaction.	<input type="radio"/>				
The online course allowed me to get to know my fellow classmates.	<input type="radio"/>				
The online course allowed me to get to know my instructor.	<input type="radio"/>				
My instructor was prompt in responding to emails and/or phone calls.	<input type="radio"/>				
I was able to develop friendships in this course.	<input type="radio"/>				
I was able to communicate effectively in this online course.	<input type="radio"/>				
The online discussions allows me to build relationships with my fellow classmates and instructor	<input type="radio"/>				
The online course allowed me to build relationships based on the sharing and exchange of ideas.	<input type="radio"/>				
Social interaction in the online course allowed me to convey my thoughts and feelings.	<input type="radio"/>				
I communicate with my online classmates even when the assignment does not require it.	<input type="radio"/>				
Online communications with my classmates helped with the learning process in the online course.	<input type="radio"/>				
Online communications with my instructor helped with the learning process in the online course.	<input type="radio"/>				

**16. Please rate how strongly you agree or disagree that the following interactive tools were an effective means of communicating with fellow students and the instructor.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Did not use this tool
E-mail	<input type="radio"/>					
Wimba Classroom	<input type="radio"/>					
Wimba Pronto/Instant Messaging	<input type="radio"/>					
Discussion Board	<input type="radio"/>					
Blogs	<input type="radio"/>					
Journals	<input type="radio"/>					

## Thank You

Thank you very much for participating in the Student Withdrawal from Online Community College Courses Survey. If you have any questions regarding this survey, please contact the principal investigator, Krista LeBrun at 601-481-1389 or by email at [kmllebrun@crimson.ua.edu](mailto:kmllebrun@crimson.ua.edu)

Thank you and have a nice day!

APPENDIX B

ADVERTISING MATERIALS SENT TO SURVEY RESPONDERS

## Advertising Materials

### LMS Announcement Posting

During the Fall 2011 Online semester, Krista LeBrun, a doctoral student in the Instructional Technology program, supervised by Margaret Rice, Ph.D., who is an associate professor in the Instructional Technology program within the College of Education at the University of Alabama is conducting research on reasons for student withdrawal from online community college courses.

If you choose to withdraw from an online course, you will receive an email with a link to an online survey. This confidential online survey includes questions about student demographics, reasons for withdrawal, social interaction, and use of online course tools. I ask that you be as honest as you can. Your responses to this survey could help improve future online courses at the community college.

Your participation is voluntary. You may choose not to participate or not to answer any specific question. The survey should take approximately 15 minutes. Thank you in advance for your honest and open participation.

If you have any questions about your rights as a participant or about this survey, please contact Krista LeBrun at [kmlebrun@crimson.ua.edu](mailto:kmlebrun@crimson.ua.edu)

### Email #1

To: [Email]

From: [klebrun@crimson.ua.edu](mailto:klebrun@crimson.ua.edu)

You are among 300 community college students who have withdrawn from an online community college course. You have been selected to participate in a research study conducted by Krista LeBrun, a doctoral student in the Instructional Technology program, supervised by Margaret Rice, Ph.D., who is an associate professor in the Instructional Technology program within the College of Education at the University of Alabama.

Link to the survey:

[https://www.surveymonkey.com/s.aspx?sm=3Ni2393oIIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=3Ni2393oIIqloYOMduJmIA_3d_3d)

Thank you in advance for taking time to complete this survey. This confidential online survey includes questions about student demographics, reasons for withdrawal, social interaction, and use of online course tools. I ask that you be as honest as you can. Your responses to this survey could help improve future online courses at the community college.

Your participation is voluntary. You may choose not to participate or not to answer any specific question.

If you choose to participate, please click on the link provided in this email to begin the survey. The survey should take approximately 15 minutes. I sincerely appreciate your honest and open participation.

If you have any questions about your rights as a participant or about this survey, please contact Krista LeBrun at [kmlebrun@crimson.ua.edu](mailto:kmlebrun@crimson.ua.edu)

Thank you again,

Krista M. LeBrun  
Principal Investigator

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.

[https://www.surveymonkey.com/optout.aspx?sm=3Ni2393olIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/optout.aspx?sm=3Ni2393olIqloYOMduJmIA_3d_3d)

#### Email #2

To: [Email]

From: [klebrun@crimson.ua.edu](mailto:klebrun@crimson.ua.edu)

You are among 300 community college students who have withdrawn from an online community college course. You have been selected to participate in a research study conducted by Krista LeBrun, a doctoral student in the Instructional Technology program, supervised by Margaret Rice, Ph.D., who is an associate professor in the Instructional Technology program within the College of Education at the University of Alabama.

Link to the survey:

[https://www.surveymonkey.com/s.aspx?sm=3Ni2393olIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=3Ni2393olIqloYOMduJmIA_3d_3d)

Thank you in advance for taking time to complete this survey. This confidential online survey includes questions about student demographics, reasons for withdrawal, social interaction, and use of online course tools. I ask that you be as honest as you can. Your responses to this survey could help improve future online courses at the community college.

Your participation is voluntary. You may choose not to participate or not to answer any specific question.

If you choose to participate, please click on the link provided in this email to begin the survey. The survey should take approximately 15 minutes. I sincerely appreciate your honest and open participation.

If you have any questions about your rights as a participant or about this survey, please contact Krista LeBrun at [kmlebrun@crimson.ua.edu](mailto:kmlebrun@crimson.ua.edu)

Thank you again,

Krista M. LeBrun  
Principal Investigator

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.

[https://www.surveymonkey.com/optout.aspx?sm=3Ni2393oIIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/optout.aspx?sm=3Ni2393oIIqloYOMduJmIA_3d_3d)

Email #3

To: [Email]  
From: klebrun@crimson.ua.edu

You are among 300 community college students who have withdrawn from an online community college course. You have been selected to participate in a research study conducted by Krista LeBrun, a doctoral student in the Instructional Technology program, supervised by Margaret Rice, Ph.D., who is an associate professor in the Instructional Technology program within the College of Education at the University of Alabama.

Link to the survey:

[https://www.surveymonkey.com/s.aspx?sm=3Ni2393oIIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=3Ni2393oIIqloYOMduJmIA_3d_3d)

Thank you in advance for taking time to complete this survey. This confidential online survey includes questions about student demographics, reasons for withdrawal, social interaction, and use of online course tools. I ask that you be as honest as you can. Your responses to this survey could help improve future online courses at the community college.

Your participation is voluntary. You may choose not to participate or not to answer any specific question.

If you choose to participate, please click on the link provided in this email to begin the survey. The survey should take approximately 15 minutes. I sincerely appreciate your honest and open participation. The survey will close on December 2, 2011.

If you have any questions about your rights as a participant or about this survey, please contact Krista LeBrun at [kmlebrun@crimson.ua.edu](mailto:kmlebrun@crimson.ua.edu)

Thank you again,

Krista M. LeBrun  
Principal Investigator

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.

[https://www.surveymonkey.com/optout.aspx?sm=3Ni2393oIIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/optout.aspx?sm=3Ni2393oIIqloYOMduJmIA_3d_3d)

Postcard

Dear Online Community College Student,

My name is Krista LeBrun and I am a doctoral student in the Instructional Technology program, supervised by Margaret Rice, Ph.D., who is an associate professor in the Instructional Technology program within the College of Education at the University of Alabama. I would like to invite you to participate in my research study to identify reasons for student withdrawal from online community college courses.

This confidential online survey includes questions about student demographics, reasons for withdrawal, social interaction, and use of online course tools. I ask that you be as honest as you can. Your responses to this survey could help improve future online courses at the community college.

Your participation is voluntary. You may choose not to participate or not to answer any specific question.

If you choose to participate, please visit

[https://www.surveymonkey.com/s.aspx?sm=3Ni2393oIIqloYOMduJmIA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=3Ni2393oIIqloYOMduJmIA_3d_3d)

The survey should take approximately 15 minutes. I sincerely appreciate your honest and open participation. Additionally, you should have received an email at your Eaglenet account with a direct link to the survey.

If you have any questions about your rights as a participant or about this survey, please contact Krista LeBrun at [kmlebrun@crimson.ua.edu](mailto:kmlebrun@crimson.ua.edu)

Thank you for your consideration,  
Krista LeBrun