Being Nontraditional and Learning Online: Assessing the Psychosocial Learning Environments, Self-Efficacy, and Affective Outcomes Among College Student Groups

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BEING NONTRADITIONAL AND LEARNING
ONLINE: ASSESSING THE PSYCHOSOCIAL LEARNING
ENVIRONMENTS, SELF-EFFICACY, AND AFFECTIVE OUTCOMES
AMONG COLLEGE STUDENT GROUPS

by

Roslyn La’Toya Ashford

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
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ABSTRACT

BEING NONTRADITIONAL AND LEARNING ONLINE: ASSESSING THE PSYCHOSOCIAL LEARNING ENVIRONMENTS, SELF-EFFICACY, AND AFFECTIVE OUTCOMES AMONG COLLEGE STUDENT GROUPS

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May 2014

The study compared traditional and nontraditional students’ attitudes about the psychosocial learning environment and their influence on self-efficacy, enjoyment of online learning, and student satisfaction by using Moos’ (1979) Model of Environmental and Personal Variables and the three dimensions of social climate as its theoretical framework. Traditional and nontraditional students were selected based on known differences between their personal characteristics/traits. A total of 151 undergraduate students taking online classes at a university in the southeastern United States participated in the online quantitative pretest/posttest. The findings revealed that nontraditional students preferred less student interaction and collaboration and more asynchronicity than traditional students. Nontraditional students also had a higher degree of enjoyment of online learning and a higher satisfaction with the degree of asynchronicity in their online courses compared to traditional students.

Additionally, the study found significant and positive associations between academic self-efficacy and psychosocial learning environment variables that include teacher support, student interaction and collaboration, authentic learning, student autonomy, equity, asynchronicity, computer use, and personal relevance. There were also
significant and positive associations between online self-efficacy and student autonomy. The study also indicated significant and positive associations between enjoyment of online learning and psychosocial learning environment variables that include computer use, authentic learning, asynchronicity, teacher support, personal relevance, and asynchronicity. Last, there were significant and positive associations between self-efficacy and enjoyment of online learning.
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ROSelyn LA'TOYA ASHFORD

2014
DEDICATION

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my wonderful parents and retired educators, R.L. and Mary Ashford, whose words of encouragement and countless hours of babysitting reminded me how important accomplishing this milestone is to them and for future generations. My sister La’Tara and brother Rodney have also encouraged me throughout this process.

I also dedicate this dissertation to my many friends, extended family, and church family who have supported and motivated me. I will always appreciate all they have done, especially Dr. Lillian S. Gibson for listening, understanding, and offering valuable advice as a former doctoral student, and Dr. Leon and Judge Linda Anderson for motivating me by sharing their triumphant story of completing their educational goals while supporting and raising their family.

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TABLE OF CONTENTS

ABSTRACT ................................................................. ii

DEDICATION .............................................................. iv

ACKNOWLEDGMENTS .................................................... v

LIST OF TABLES ............................................................. ix

LIST OF ILLUSTRATIONS ................................................ x

CHAPTER

I. INTRODUCTION ...................................................... 1
   Overview/Background
   Statement of the Problem
   Purpose of the Study
   Research Questions
   Justification
   Delimitations and Assumptions
   Definition of Terms
   Summary

II. REVIEW OF RELATED LITERATURE ............................. 29
   Introduction
   Theoretical Framework
   Current Empirical Literature
   Summary

III. METHODOLOGY ..................................................... 69
   Introduction
   Participants
   Research Design
   Instruments of Data Collection
   Procedures for Conducting the Study
   Data Analysis Procedures
   Summary
IV. FINDINGS

Introduction
Report of Descriptive Data
Report of Data Results
Summary

V. DISCUSSION

Introduction
Summary of Study
Conclusions and Discussion of Results
Implications and Recommendations
Limitations
Recommendations for Future Research

APPENDIXES

REFERENCES
LIST OF TABLES

Table

1. Characteristics of Traditional and Nontraditional College Student Groups……57
2. Attitudes and Behaviors of Traditional and Nontraditional College Student Groups………………………………………………………………………60
3. Percentages of Sociodemographics among Research Participants…………84
4. Percentages of Nontraditional Student Characteristics and Nontraditional Student Status by Research Participants…………………………………………………………85
5. Means (s.d.) for Psychosocial Learning Environment Subscales…………87
6. Means (s.d.) for Preferred and Actual Affective Learning Variables…………94
7. Means (s.d.) for Group Pretest Preferred and Posttest Actual Scores on the OLES......................................................................................................................98
8. Within Groups ANOVA of Pretest Preferred and Posttest Actual OLES Scores and Significance Level between Traditional and Nontraditional Student Groups…………………………………………………99
9. Means (s.d.) for Group Preferred and Actual Affective Learning Variables and Student Satisfaction Scores………………………………………………………102
10. Means (s.d.) for Group Student Satisfaction Scores and Between Group Differences (ANOVA results) on the OLES……………………………………….104
11. Academic Self-Efficacy-Environment Associations……………………105
12. Online Learning Technology Self-Efficacy-Environment Associations ………106
13. Enjoyment-Environment Associations………………………………………107
LIST OF ILLUSTRATIONS

Figure

1. Adaptation of Moos (1979) Model of the Relationship Between Environment and Personal Variables and Student Stability and Change…………………………...33

2. Adaptation of Moos (1979) Model—The Relationship Between the Online Course and College Student Groups as Proposed Environment-Person Variables and Three Student Outcomes…………………………………………………………38
CHAPTER I
INTRODUCTION

Overview/Background

The rising rates of older adults entering college in the United States adds to a growing need for institutions of higher learning (IHLs) to accommodate the lifestyles of adult learners (U.S. Department of Education, 2002). For instance, higher education enrollment trends reflect that more adults prefer a part-time enrollment status or participate in distance education to balance their work, school, and familial responsibilities. Distance education typically includes courses that are “delivered by live interactive audio or videoconferencing, pre-recorded instructional videos, webcasts, CD-ROM or DVD, and computer-based systems delivered over the Internet” (U.S. Department of Education, 2011a, p. 9). To date, the majority of students enrolled in distance education courses that are delivered online. Further, older adults, married individuals, individuals who have dependents, or students with work obligations have enrolled in distance education courses and programs at a higher rate than others (U.S. Department of Education, 2011a).

In recent years, the online higher education market has experienced a disproportionate surge in annual student enrollment compared to traditional college enrollment rates, and more institutions report that online education is critical to their long-term strategy (Allen & Seaman, 2011). The forecast for online enrollment growth versus traditional enrollment remains constant; however, the annual growth rate for online enrollment has declined in comparison to previous years (Allen & Seaman, 2011; U.S. Department of Education, 2011a). Although online learning provides a flexible alternative to students, research suggests a trend that persistence and dropout rates
continue to impede the progress of online higher education, in part, due to student-related and course-related factors (Borrego, 2002; Carr, 2000; Hershkovitz & Nachmia, 2011; Holder, 2007; Rovai, 2003). Yet, the prospects of a higher quality of life and a more competitive workforce warrant the need for successful online education courses, programs, and students. As such, there is an interest in exploring the attitudes and outcomes of nontraditional students especially in online learning environments because enrollment trends suggest that this student group has largely driven the demand for online education compared to traditional students; thus, the nontraditional student is to a greater extent impacted as an online learner (U.S. Department of Education, 2011c).

An online course is defined as “a course where most or all of the content [80 percent or more] is delivered online, and typically there are no face-to-face meetings” (Allen & Seaman, 2011, p. 7). The major components of the course include the type of communication, either synchronous or asynchronous, and the interaction between a group of learners, the content, and an instructor. Synchronous communication allows two or more individuals to communicate together at the same time, or simultaneously, such as carrying on a phone conversation. Some Web-based tools that are classified as synchronous include live video or audio chatting (i.e., Skype), chat rooms, and instant messaging (i.e., MSN and Yahoo Messenger, Google Chat).

Comparatively, asynchronous communication allows two or more individuals to communicate with each other at different times. For example, emailing is considered an asynchronous tool because an individual sends an email message to another person, but the communication does not occur at the same time. Additionally, some positive attributes of online learning environments include “the inherent features of anytime and
anywhere [learning], many to many communication, computer-mediated, flexibility, and high-level of interactivity” (Hu & Wang, 2008, p. 678).

Effective online learning environments are critical, as the results of a poorly designed learning environment are known to negatively influence students’ cognitive and affective learning outcomes (Chang & Fisher, 2001; Walker & Fraser, 2005). Cognitive outcomes relate to the acquisition of students’ mental skills such as the ability to comprehend, recall information, or solve problems (Bloom, 1956). Affective outcome categories have included factors such as student satisfaction, morale, attitude toward the subject matter, and enjoyment of the learning experience, to name a few (Aldridge, Dorman, & Fraser, 2004; Klopfer, 1971; Zandvliet & Fraser, 2004). Additionally, students’ attitude of their classroom environment is a positive predictor of their learning outcomes, even when individual student characteristics or general ability are considered (McRobbie & Fraser, 1993).

The classroom environment refers to its social climate, a term coined by Moos (1979), and focuses on factors such as the reported quality of relationships or level of personal growth within an environment. More recently, the term psychosocial learning environment has been used to describe the social climate in educational environments and is also used to describe the learning environments in the current study. When students appraise the psychosocial learning environment as being favorable, they are more likely to report positive outcomes such as course satisfaction, enjoyment, and a higher level of academic achievement. In contrast, when students’ opinions of the psychosocial learning environment are negative, they report lower levels of satisfaction, enjoyment, and academic achievement. The current study explored nontraditional and traditional
students’ attitudes regarding the psychosocial learning environment in online courses and the influence of attitudes on outcomes, including the stability or change in self-efficacy, enjoyment of online education, and satisfaction.

A number of concerns have prompted a discussion about students’ attitudes and the psychosocial learning environment in their online courses. First, students withdraw from online courses at a higher rate than face-to-face courses. Second, many online students seem to feel socially disconnected from the learning community that naturally exists in traditional classrooms. Last, more emphasis should be placed on how nontraditional students feel not only about learning online but also about their own psychosocial online learning environments and its impact on learning outcomes.

Statement of the Problem

Discussions of the problems that provide the backdrop for the current research study are outlined in this section and include an examination of a broader scope of socioeconomic issues that precede educational concerns that adult learners may commonly face. First, problems associated with economic recessions, unemployment, and educational attainment levels are examined. Second, a discussion on projected college enrollment trends among nontraditional students and related persistence problems in online education are considered.

*The 2007-09 U.S. Economic Recession*

The condition of the U.S. economy took a noticeable downward turn between December 2007 and June 2009, commonly referred to as “The Great Recession” of 2007-09, when the country experienced one of the longest economic upsets since World War II. According to the National Bureau of Economic Research (2010), “a recession is a
period of falling economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales” (p. 1). During the same time that the American banking system almost collapsed, home mortgage lending was abruptly stifled by poor lending practices, the federal government offered bailouts to the U.S. automobile industry, several major businesses closed their doors, employee lay-offs increased, unemployment rates soared, many Americans lost their homes, and consumer confidence was at an all-time low.

GDP, or gross domestic product, is a factor used to measure the overall economic activity of a country in terms of the total market value of their produced goods or services, depending on either consumer and government spending (GDP) or the combination of total income (GDI), employment, and aggregate hours of work (NBER, 2010). A higher percentage of GDP per capita indicates a stronger economy versus a lower percentage, which could be a sign of a weakened economy. In short, analysts measure the economy by comparing or averaging the real GDP or real GDI and assessing this value monthly, quarterly, or annually (NBER, 2010).

Improvements to the GDI and GDP values marked the end of the 18 month recession, but the long-term effects of a recovering economy have remained quite visible, specifically in regard to unemployment rates and the significant job losses in roughly every corner of the job market. The June 2009 unemployment rate was 9.5%, or 14.7 million unemployed Americans, and approximately 30% of those individuals were considered long-term unemployed or seeking employment over a two year period (U.S. Department of Labor, 2009a).
Unemployment and educational attainment level. A number of groups were more so affected by the recession than others. In addition to men, young adults, unmarried adults, and single parents, the recession also largely impacted those with less education, while the hardest-hit industries included manufacturing, professional and business services, and construction (U.S. Department of Labor, 2009a; Carsey Institute, 2011). Moreover, surveys revealed that there were 793,000 discouraged workers (i.e., believe that there are no jobs available) out of the 2.2 million marginally attached individuals (i.e., report that they have not searched for work within the past four weeks at the time of survey) at the end of the recession (U.S. Department of Labor, 2009a). In addition to having the belief that there are no job opportunities available, a lack of schooling or training was also reported as one of the top reasons that discouraged workers chose to discontinue their job-seeking activities (U.S. Department of Labor, 2009b).

A lower level of educational attainment is associated with a higher level of unemployment and a lower income. Not surprisingly, the 2009 unemployment rate among college-educated individuals was 4.6% compared to that of workers without a high school diploma, which was almost 15% (U.S. Department of Labor, 2010). The national median weekly earnings also reflect that more education is associated with lower unemployment and higher earnings (U.S. Department of Labor, 2012a). Also, educational attainment has made a difference in the annual average unemployment rates over the past ten years. Specifically, a smaller percentage of individuals, age 25 years and older, who have attained a bachelor’s degree and higher are unemployed compared to individuals with less than a bachelor’s degree and high school graduates. Further, those who have less than a high school diploma experience a higher percentage of
unemployment than other groups (U.S. Department of Labor, 2012b). During the first quarter of 2012, the median weekly earnings for full-time workers were $450, $653, and $1,158 for individuals without a high school diploma, high school graduates, and bachelor’s level graduates, respectively. The median weekly full-time earnings for individuals with a professional or master’s degree and above ranged from $2,284 to $3,366 (U.S. Department of Labor, 2012c). Thus, educational attainment is a factor that will continue to influence employability, income, and socioeconomic status in the United States.

Economic recessions and college enrollment. Research indicates that there is a direct association between economic recessions, unemployment, and college enrollment trends, and a large number of individuals appear to have returned to or entered college in response to under- or unemployment and the poor job market conditions (Kantrowitz, 2010). College enrollment increases up to 4.5% of total enrollments during recession years in comparison to 1.5% between recessions, as the unemployed, underemployed, marginally attached, or discouraged workers perceive that more education is a way to prepare themselves for better jobs, more pay, or a career change (Kantrowitz, 2010). Additionally, Kantrowitz (2010) reports that the annual college enrollment growth rates during the Great Recession were 2.8, 2.5, and 1.8% for 2007, 2008, and 2009, respectively.

College Enrollment Projections for Nontraditional Students

During the 2007-09 fall enrollment semesters, the total number of nontraditional students was 23 million as compared to the previous three years, where approximately 20 million nontraditional students were enrolled (U.S. Department of Education, 2011b). A
nontraditional student is typically defined by age and usually includes individuals enrolled in undergraduate or certificate programs who are 25 years of age or older; however, other factors such as enrollment patterns, enrollment status, financial status, employment status, and family status also help to determine whether students are considered traditional or nontraditional (U.S. Department of Education, 1996). Undergraduate students classified as nontraditional are also more than likely enrolled part-time, employed part-time or full-time, married with children, or are single parents (Center for Law and Social Policy, 2011). The annual nontraditional student enrollment rate at postsecondary institutions is expected to increase to 23% between 2010 and 2019 (U.S. Department of Education, 2011b). This expected growth is possibly attributed to the monthly unemployment rates that remain high, a desire for higher earnings, and the job market outlook that reflects a rising number of employment opportunities that require at least a bachelor’s degree (U.S. Department of Labor, 2012a).

The Influence of Technology Use in Higher Education

Within the past two decades, the Internet transformed the way that businesses and organizations operate, including higher education institutions. For instance, prior to the development of Web-based systems, student enrollment and course registration were two tasks that could consume an entire day for administrative staff and students. Now, students use personal computers to access a secure Web portal, provided by their college or university Website, to complete a number of tasks within a matter of minutes. As online self-help systems were diffused among institutions, these trends later opened the door toward the adoption of more innovative distance education methods, namely online course delivery.
Online education alleviated a number of institutional barriers that adult learners have experienced on college campuses, and many students participate in online learning in record numbers each year (Fairchild, 2003; U.S. Department of Education, 2011a). During the fall of 2010, 6.1 million students were enrolled in at least one online course, and the reported annual growth rate for online enrollment versus the annual growth of the overall higher education student population was approximately 10: <1% (Allen & Seaman, 2011). College enrollment and persistence trends have indicated higher enrollment and lower persistence in online education courses when compared to traditional, face-to-face formats, which suggests that online learning environments may pose unique challenges especially for nontraditional learners. Such problems become amplified as increased marketing efforts from various institutions target nontraditional students for online education, and more students are expected to enroll.

**Persistence Problems in Online Classrooms**

Rovai (2003) defines persistence as “the behavior of continuing action despite the presence of obstacles” (p. 1). In general, persistence has become problematic for online learners and schools, in that, the rates among students persisting in online courses have been lower than those enrolled in traditional brick and mortar courses. Available literature suggests that factors such as low learner motivation, personal reasons, role strain, program-related reasons, and age are predictors of persistence and attrition (Bean & Metzner, 1985; Fairchild, 2003; Keller, 2007; Park, Perry, & Edwards, 2011; Villella & Hu, 1991).

**Self-efficacy and persistence issues.** An underlying issue that should be addressed when considering problems such as persistence is self-efficacy (Zimmerman, 1997).
Self-efficacy, which refers to an individual’s personal judgment of his or her capabilities, influences educational development. Student motivation, persistence, level of effort, choice of activities, performance rate, and educational self-regulation are factors that have been linked to students’ level of self-efficacy (Bandura, 1977; Multon, Brown, & Lent, 1991; Zimmerman, 1997).

Relative to the current study, identifying nontraditional student self-efficacy is important for three reasons. First, older adults who return to school with years of work experience may feel a lack of confidence to perform successfully as a student. Second, the technological advancements that have occurred on most college campuses may also impact personal judgments about technological capabilities. Third, the available literature suggests that learning environment attitudes are associated with a student’s personal efficacy (Lorsbach & Jinks, 1999; Schunk, 1982/1983). Schunk (1982/1983) revealed that self-and external monitoring, which are similar to Moos’ (1979) concepts of involvement and support, led to significantly higher levels of efficacy among children developing math competencies. Also, Lorsbach and Jinks (1999) demonstrated that students’ academic self-efficacy seems to influence other attitudes, especially attitudes about the learning environment. Therefore, the association between academic and technological self-efficacy, or online learning efficacy, and attitudes toward the psychosocial learning environment in online courses is warranted in this study.

Learning environment attitudes and persistence. Just as individuals are motivated to remain in work environments that promote positive relationships, a level of organization, flexibility, and room for personal growth, so are students just as interested in participating in a learning environment that does the same. For example, the literature
suggests that a sense of community is valued among learners, is essential in maintaining interest and participation, and can be mitigated by the school (Rovai, 2002). Moos (1994, 2003) purports, “when a setting emphasizes relationship dimensions [involvement, emotional support, affiliation, cohesion], people are more satisfied…Positive relationships foster commitment and motivation, reduce absenteeism and dropout rates, and make the setting more stable” (p. 16).

In short, the increasing population of adults entering college coupled with persistence and dropout problems in online courses has prompted an interest in examining the entire social landscape of online classrooms and students’ attitudes toward these environments. As many may assume, online learning is a favorable learning option for today’s working force. Yet, the high enrollment and low persistence rates in online education suggest otherwise and raise further questions beyond determining the level of acceptance for online education among students. In other words, what types of psychosocial learning environments exist within online classrooms and in what ways do such environments influence students and student outcomes that may inadvertently lead to decisions to persist or dropout?

**Purpose of the Study**

In an effort to advance the discussion on persistence and dropout decisions among students in online higher education, the purpose of this study is to examine the interaction between personal and environmental variables and its influence on stability or change outcomes. Two distinct college student groups (CSG), traditional and nontraditional students, were selected based on known differences among their personal characteristics/traits (i.e., enrollment patterns and decisions, employment status, family
and financial status, reported attitudes about combining work and school, preferred coping strategies, reported self-efficacy, and persistence and attainment rates), to determine whether there are also differences in attitudes toward the psychosocial learning environment in their online courses. Thus, the current study examines the interaction between the college student groups and eight dimensions of the psychosocial learning environment that include computer usage, teacher support, student interaction and collaboration, personal relevance, authentic learning, student autonomy, equity, and asynchronicity.

Stability or changes in students’ affective learning outcomes such as self-efficacy, enjoyment of online education, and satisfaction of the psychosocial learning environment are also an important component of this study. Further, the relationships between the eight psychosocial learning environment attitudes and self-efficacy are examined. Also, the associations between these same attitudes and students’ enjoyment of online education are assessed.

Because the differences in students’ attitudes may be related to their level of college experience or the number of courses that an individual has taken, this study will explore whether differences between traditional and nontraditional students are influenced by the interaction of students’ undergraduate classification and/or experience taking online courses. Moreover, being a traditional or nontraditional student may also influence online learners’ self-efficacy. Thus, the study will explore whether there are differences in self-efficacy for individuals of different college student groups.
Research Questions

The following research questions were developed to assess the relationships among the variables:

1. Are there significant differences in attitudes toward eight psychosocial online learning environment dimensions across a semester for individuals in different college student groups? Specific research questions include the following:
   a. Are there significant mean differences in attitudes about computer usage in online education courses across a semester for traditional and nontraditional students?
   b. Are there significant mean differences in attitudes about teacher support in online education courses across a semester for traditional and nontraditional students?
   c. Are there significant mean differences in attitudes about student interaction and collaboration in online education courses across a semester for traditional and nontraditional students?
   d. Are there significant mean differences in attitudes about personal relevance in online education courses across a semester for traditional and nontraditional students?
   e. Are there significant mean differences in attitudes about authentic learning in online education courses across a semester for traditional and nontraditional students?
f. Are there significant mean differences in attitudes about asynchronicity in online education courses across a semester for traditional and nontraditional students?

2. Does undergraduate classification have an influence on traditional and nontraditional student attitudes about the psychosocial learning environment in an online course? Specific research questions include the following:

a. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about computer usage in an online course?

b. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about teacher support in online education courses?

c. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about student interaction and collaboration in an online course?

d. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about personal relevance in an online course?

e. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about authentic learning in an online course?
f. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about student autonomy in an online course?

g. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about equity in an online course?

h. Is there a significant interaction between being a traditional/nontraditional student and a freshman, sophomore, junior, or senior on attitudes about asynchronicity in an online course?

3. Does experience taking online courses have an influence on traditional and nontraditional student attitudes about the psychosocial learning environment in an online course? Specific research questions include the following:

a. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about computer usage in an online course?

b. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about teacher support in an online course?

c. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester
(none, one-two, three-four, five or more) on attitudes about student interaction and collaboration in an online course?

d. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about personal relevance in an online course?

e. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about authentic learning in an online course?

f. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about student autonomy in an online course?

g. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about equity in an online course?

h. Is there a significant interaction between being a traditional/nontraditional student and the number of online courses taken prior to the semester (none, one-two, three-four, five or more) on attitudes about asynchronicity in an online course?
4. Does being a traditional or nontraditional student influence students’ affective learning outcomes? If so, in what ways? Specific research questions include the following:

   a. Are there significant mean differences in affective learning outcomes (as measured by the stability or change in self-efficacy, enjoyment of online learning, and satisfaction of the online environment) for traditional and nontraditional students?

   b. Is there a significant interaction between being a traditional or nontraditional student and undergraduate classification on affective learning outcomes (self-efficacy, enjoyment of online learning, satisfaction of the online environment)?

   c. Is there a significant interaction between being a traditional or nontraditional student and the number of online courses taken on affective learning outcomes?

5. What is the relationship between attitudes about the psychosocial learning environment in an online course and self-efficacy? Specific research questions include the following:

   a. What is the relationship between attitudes about computer usage and self-efficacy?

   b. What is the relationship between attitudes about teacher support and self-efficacy?

   c. What is the relationship between attitudes about student interaction and collaboration and self-efficacy?
d. What is the relationship between attitudes about personal relevance and self-efficacy?

e. What is the relationship between attitudes about authentic learning and self-efficacy?

f. What is the relationship between attitudes about student autonomy and self-efficacy?

g. What is the relationship between attitudes about equity and self-efficacy?

h. What is the relationship between attitudes about asynchronicity and self-efficacy?

6. What is the relationship between attitudes about the psychosocial learning environment in an online course and the enjoyment of online learning?

Specific research questions include the following:

a. What is the relationship between attitudes about computer usage and the enjoyment of online learning?

b. What is the relationship between attitudes about teacher support and the enjoyment of online learning?

c. What is the relationship between attitudes about student interaction and collaboration and the enjoyment of online learning?

d. What is the relationship between attitudes about personal relevance and the enjoyment of online learning?

e. What is the relationship between attitudes about authentic learning and the enjoyment of online learning?
f. What is the relationship between attitudes about student autonomy and the enjoyment of online learning?

g. What is the relationship between attitudes about equity and the enjoyment of online learning?

h. What is the relationship between attitudes about asynchronicity and the enjoyment of online learning?

7. What is the relationship between self-efficacy and the enjoyment of online learning?

Justification

There are a substantial number of adults returning to school as a result of unfavorable economic conditions, and the ability to take courses through online learning seems to have also influenced students’ enrollment decisions. The perceived attributes of online learning, particularly relating to its relative advantage and compatibility, have encouraged the rapid adoption of online education among students (Rogers, 2003). For example, a student may initially enroll in an online course because he or she believes that online learning will save time and effort, thus meeting a felt need (2003). However, once students enter into these types of Web-based classrooms, many do not persist. Whether previous expectations are either confirmed or refuted, effective measures should be taken to ensure the successful completion of courses and programs.

As school administrators continue to address fundamental infrastructure issues (i.e., making the provision for adequate faculty support, additional staff, equipment, technical training, and incentive programs), they should also provide interventions that not only target students’ cognitive learning outcomes but also their affective learning
outcomes (Simonson, Smaldino, Albright, & Zvacek, 2009). It is evident that the appropriate instructional content and delivery methods are critically important in students’ cognitive development. However, available literature also supports the notion that the psychosocial learning environment also influences students’ cognitive and affective outcomes. Specifically, perceptions about the environment largely impact human behavior, in terms of the way individuals act, think, feel, learn, and perform.

Moos (1994, 2003) purports that the assessment of a social climate in a number of settings has been useful in diagnosing problems, promoting change, appraising and improving leadership, building cohesion, and identifying risks. Within the context of online education, individuals and groups can capitalize on such knowledge by gaining an understanding of the dynamics of the psychosocial learning environment; that is, the quality of relationships, opportunities for personal growth, and the degree of order, organization, clarity, and control that exist within the online course. The combination of these dimensions influences students’ learning experiences. Thus, students and faculty benefit from the information gathered about their environment and the subsequent interventions that follow an environmental assessment.

Despite the wealth of information that environmental assessments provide, the psychosocial learning environment among college-level online students has been relatively understudied (Walker & Fraser, 2005). One reason that may explain the limited amount of available data includes the reality that there remains a sense of newness about online teaching and learning. As such, the research on online education has primarily involved comparative studies between online learning and face-to-face instruction (U.S. Department of Education, 2010), communication technology tools (Nnazor, 2009),
challenges and strategies for evaluating online learning (U.S. Department of Education, 2008), faculty perceptions of online teaching (Bolliger & Wasilik, 2009; Choi & Park, 2006), the diffusion and adoption of course management systems (Morgan, 2003; Rogers, 2003; Soffer, Nachmias, & Ram, 2010; West, Waddoups, & Graham, 2007), online student motivation (Bekele, 2010), and online student retention (Capra, 2011). Such studies have been important towards understanding the problems, trends, value, and potential of online education within postsecondary education settings. At present, a natural extension of these studies involves delving into the learning environments of these same settings.

Online learning environment studies have generally focused on developmental research and the use of validated instruments to assess learning environments, student and teacher perceptions of course-specific environments, and learning outcomes associated with particular environments. Moreover, a review of learning environment research indicates that few studies have assessed the psychosocial learning environments within online higher education settings, and no known studies have evaluated the attitudes toward the psychosocial learning environment between traditional and nontraditional student groups. The current study will add to the literature by assessing the interaction between personal and environmental variables and its influence on stability and change outcomes. Identifying the dimensions of the psychosocial learning environment that are associated with an improvement in satisfaction, enjoyment of online education, or changes in self-efficacy is an important aspect of this study will add to the literature relating to key areas of the environment that nontraditional students may find essential toward positive affective outcomes.
Delimitations and Assumptions

The intentions of this study are to understand how the psychosocial learning environment in online courses is perceived among nontraditional students. The primary scope of analysis is limited to the attitudes of college students who are classified as “nontraditional” by definition. The circumstances surrounding why nontraditional students return to school, coupled with the everyday pressures of being an adult learner, set the tone for a fruitful learning environment study. The study will collect data from a classroom of learners, which includes both nontraditional and traditional students. The information will be used to distinguish between the two groups and to identify the impact of a college student group on student attitudes. Additionally, factors such as the variables of interest, theoretical perspectives, choice of objectives, research question, and hypotheses have helped to shape the type and amount of information that becomes available as a result. As such, there are a few delimitations of the study that are worth mentioning, followed by a brief discussion of study assumptions.

The ongoing debates about healthcare, the economy, and education offer fertile ground to study practical problems and to inform policy. The choice of problem, or the decision to address a domino effect (i.e., hundreds of adults returning to school) imposed by a weakened economy, is a delimitation that initially helped to narrow the research focus. As students return to various educational settings, the learning environment is particularly critical in determining how and whether students learn effectively. Therefore, the dynamics of the learning environment, especially in online education courses, provide further interest into the topic of discussion. Related problems such as faculty members’ adoption of online teaching were also considered, but later excluded. Their individual
adoption decisions certainly influence online learning environments; however, students’ perceptions of the environment seemed to be a more viable study.

Educational environments other than those where 80% or more of the instruction is delivered online are excluded from this discussion, based on the notion that the information obtained from students in those environments is not directly relevant. An abundance of earlier studies compared face-to-face learning environments and online learning environments to explore student preferences for either environment. But, most of the findings provide superficial information and do not necessarily contribute to the breadth of knowledge toward understanding online education. Further, the researcher agrees with Walker and Fraser (2005) who assert that “distance education is a unique and alternative form of education” (p. 302).

It was desirable to compare differences in students’ perspectives based on the type of school that they attended (i.e., public, private non-profit, private for-profit; four-year or two-year college). The distribution and use of resources is strongly associated with the institution level and financial control and the resources allocated to online education vary among these colleges and universities (U.S. Department of Education, 2011a). There are reported differences in students’ level of participation in taking distance education courses based on the financial control of an institution. Therefore, the data may have revealed differences among students’ perceptions of the psychosocial learning environment based on these factors. However, this direction was not a feasible one, especially regarding two distinct problems that may have occurred during the data collection process. First, it was unclear whether or not the researcher would gain entrance into these institutions within the designated timeframe and proper IRB approval.
Second, the sample size from each institution type had to be large enough to draw inferences based on the data. Thus, the presence of such unknowns provided a just cause to exclude these factors.

Similar studies were reviewed to determine the most appropriate framework to use, considering the importance of identifying a theoretical framework suitable for learning environment research. Moos’ (1979) Model of Environmental and Personal Variables, including the three dimensions of social climate, was selected for this study. Thus, the researcher has made an assumption that the model is an accurate reflection of the external and internal factors that influence attitudes and behaviors within the learning environment.

The researcher also assumes that the phenomena under investigation (i.e., college student groups, the dimensions of the psychosocial learning environment, self-efficacy, enjoyment, and satisfaction) have been clearly defined and are measurable. In terms of the current study, a college student group is used to distinguish between traditional and nontraditional students, which have been further defined based on differences in student characteristics such as enrollment patterns, financial and family status, high school graduation status, and other reported attitudes and behaviors. The scale used to measure the psychosocial learning environment in online courses and self-efficacy have been used in previous studies that targeted college students’ attitudes and have been reported as measurable and effective. Additionally, the researcher assumes that the instrument(s) being used to provide a valid and reliable measurement of these variables.

Finally, throughout a vast body of literature, researchers have demonstrated a preference for gathering participant data that appears to be less subjective than that of
observers or facilitators. Moos (1979) considered the use of students’ perceptions as a
guiding principle toward understanding educational settings, specifically stating,
“Students conversely have time to form accurate, durable impressions of an educational
setting’s social milieu” (p. 21). Thus, a major assumption is that students’ reported
attitudes are honest and a genuine reflection of their beliefs.

Definition of Terms

The key terms that provide the framework for this discussion are defined in this
section.

*Asynchronous communication* is a type of communication that involves the
interaction between two or more individuals at distinctly different times (i.e., emailing).

*College Student Group (CSG)* distinguishes between traditional and nontraditional
undergraduate college student characteristics.

*Enjoyment* will refer to the extent that a student reports the enjoyment of distance
education or online learning.

*Online course* refers to the delivery of instructional content via the Internet, at
least 80% of the time and typically does not include face-to-face class meetings.

*Persistence* refers to either the length of time that a student stays in a course or the
extent to which a student continues an activity or task in the face of obstacles.

*Psychosocial learning environment* includes the psychological and social factors
in the online course that influence students’ behavior, feelings, and adaptation within this
type of setting. The psychosocial learning environment is synonymous to the social
climate. The researcher will measure the psychosocial learning environment in
undergraduate online courses by assessing students’ attitudes about eight dimensions:
computer usage, teacher support, student interaction and collaboration, personal relevance, authentic learning, student autonomy, equity, and asynchronicity.

*Satistaction* is the extent to which a student feels good about the learning experience or the degree to which the learning experience is aligned with a learner’s expectations or preferences.

*Self-efficacy* involves a cognitive appraisal of information to determine whether or not a person believes that he or she is capable of producing an expected outcome.

*Social climate* is a broad term used to describe the “personality of a setting or environment” (Moos, 1994, 2003, p. 1).

*Synchronous communication* involves the simultaneous interaction between two or more individuals.

**Summary**

Within the current decade, the number of nontraditional students expected to enroll in postsecondary institutions will remain high, partly in response to a weakened economy that has left millions of Americans under- and unemployed. Higher education provides an alternative to improve opportunities for job security and a higher quality of life. Likewise, online education provides an alternative in regards to where and when students learn. Thus, the online higher education market has grown exponentially as colleges and universities endeavor to meet students’ needs.

The available literature details higher enrollment rates yet lower persistence among nontraditional online learners in comparison to students in traditional classrooms. This discrepancy warrants further investigation into students’ online learning environments and provides the rationale for this study. Specifically, the current study proposes to examine nontraditional online students’ attitudes toward their psychosocial
learning environment. Moos’ (1979) Model of the Relationship between Environmental and Personal Variables and Student Stability and Change, which includes the three social climate dimensions, will also guide the analysis of students’ attitudes toward online learning environments.

Bandura’s (1977) concept of self-efficacy is used to examine the extent to which students’ personal judgment of their capabilities is associated with being a nontraditional or traditional student and attitudes about the psychosocial learning environment. The current study uses two variables to examine self-efficacy among college students: academic and online learning technology self-efficacy. The proposed study will determine the dimensions of the psychosocial learning environment in online courses that are associated with changes in self-efficacy among nontraditional students.

Understanding the impact of the psychosocial learning environment on nontraditional students’ satisfaction and enjoyment of online learning is important. Satisfaction is related to how well students feel that the learning environment matches or exceeds their expectations and is associated with persistence and motivation. Enjoyment is the extent to which students enjoy distance education or online learning as an instructional delivery mode. Therefore, the proposed study intends not only to assess levels of satisfaction or enjoyment, but also to identify the dimensions of psychosocial learning environments in online courses that are associated with a high satisfaction and enjoyment of online education by nontraditional students.

The chapter to follow provides a context for the proposed study and begins with the theoretical framework for understanding the interaction between personal and social-environmental factors that influence stability and change in student attitudes and
behavior. The review of literature then focuses on persistence and enrollment trends in postsecondary online education, online learning environments, the relationship between perceived classroom environment and student outcomes, and differences between college student groups. The chapter concludes with a summation and introduction to the research methodology.
CHAPTER II
REVIEW OF RELATED LITERATURE

Introduction

The current study will examine the interaction between personal and environmental variables and their influence on stability and change outcomes. The interaction between two college student groups, nontraditional and traditional college students, and the learning environment in online courses will be assessed by measuring students’ reported attitudes toward eight dimensions of the psychosocial learning environment. Changes in or the stability of student satisfaction, the enjoyment of online education, and self-efficacy are examined as outcome variables. The current study will compare and contrast student groups’ reported self-efficacy and their overall attitudes toward the psychosocial learning environment. The level of undergraduate classification within and between college student groups will be used to determine whether the attitudinal differences that may exist are mediated by higher education experience. In conjunction with exploring changes or stability in student outcomes, this study will also assess relationships among learning environment dimensions and outcomes of high satisfaction, a high enjoyment of online education, and changes in self-efficacy among nontraditional college students.

The literature review provides a foundation for this study and begins with a theoretical framework for understanding the interaction between social-environmental and personal factors that influence stability and change in student attitudes and behavior. The review of literature then focuses on persistence and enrollment trends in postsecondary online education and online learning environments and the relationship
between perceived classroom environment and student outcomes as well as differences between college student groups. It is followed by a chapter summary and introduction to the proposed research study methods.

Theoretical Framework

The theoretical framework developed by Rudolf Moos was selected for the current research study. The following section discusses key concepts of the historical underpinnings of the framework and provides an explanation of Moos’ environmental-personal model and its use for understanding the relationship between the psychosocial learning environment, students’ attitudes, and affective outcomes.

Social Climate Dimensions

Moos (1979) developed a framework for evaluating educational environments, which evolved from earlier research (Moos, 1974; Moos, 1975; Moos, 1976). Initially, Moos’ (1974) investigation of environments was an attempt to understand, evaluate, and improve the social environment of treatment settings. The concept of social climate, relating to the atmosphere of a particular environment, was used to identify its impact within similar settings (Moos, 1975). Worth mentioning again is that the social climate in educational environments has been referred to as the psychosocial learning environment. Aside from the review of Moos' theoretical framework, the current research study also makes reference to the psychosocial learning environment as a type of social climate.

Moos (1976) having analyzed a number of social settings described a set of four interrelated domains that exist as part of an environmental system. These domains include the physical setting, organizational factors, the human aggregate, and social
climate. The physical setting can be best described as the outward appearance of the environment. Organizational factors involve system variables such as size (Moos, 1979). Human aggregate describes the combined characteristics of a group within a particular setting (Moos, 1979). As an example, a chess group may be considered reserved, intelligent, inquisitive, and competitive; thus, these qualities comprise their human aggregate. Moos believed that the social climate has a substantial impact on the aforementioned domains within the environmental system. Importantly, the environmental system is important toward understanding the environment as a whole, but Moos (1979) considers the combination of the social environment and physical environment as essential indicators.

His framework extends the concept of social environments toward a model to explain the relationship between environmental (i.e., the social climate) and personal system factors on human behavior, including students’ behavior and attitudes (Moos, 1976; Moos, 1979). His (1979) Model of the Relationship between Environmental and Personal Variables and Student Stability and Change adopts a social-ecological perspective but appears to have also been influenced by social psychologist, Kurt Lewin (1935).

Lewin (1935) developed a person-environment approach to explain psychological development. Specifically, Lewin describes psychological environmental forces and personal state as predictors of children’s behavior. In 1935, he proposed an equation to illustrate the relationship between a person, the environment, and subsequent behaviors. Unlike traditional psychologists that attributed human behavior to past experiences, Lewin stated, “to understand or predict the psychological behavior (B) one has to
determine for every kind of psychological event (actions, emotions, expressions, etc.) the momentary whole situation, that is, the momentary structure and the state of the person (P) and the psychological environment (E)” (Lewin, 1935, p. 79). The Lewin Equation is oftentimes displayed as $B=f(P,E)$.

Murray (1938) and Stern (1970) prompted the discussion on social climate, leading to Moos’ (1979) conceptualization of three domains that existed in social environments, also known as the social climate dimensions (Moos, 1994, 2003). Based on a fifteen year analysis of the underlying patterns of social environments, the social climate dimensions provided the context to evaluate the social-environmental variables of numerous settings. Additionally, the dimensions have been used to develop scales to evaluate the impact of social environments among participants within treatment programs, families, work settings, social and task-oriented groups, correctional institutions, military settings, and educational settings (Moos, 1979). In educational settings, the psychosocial learning environment includes (a) a relationship dimension, (b) personal growth or goal orientation dimension, and (c) a system maintenance and change dimension. Within each domain, additional subscales or dimensions were developed. For instance, Moos (1979) suggests that the relationship dimension assesses students’ attitudes about the level of involvement and teacher support in the classroom. Altogether, Moos’ framework provides a foundation to evaluate the attitudes of college student groups, their assessment of the psychosocial learning environment in online courses, and its impact on the stability or change in attitudes and affective learning outcomes.
Moos’ Framework for Evaluating Educational Settings

Moos (1979) developed a conceptual framework that demonstrates the relationship between environmental and personal system variables on students’ educational development, which is helpful in examining students’ personal and psychological attributes and the psychosocial learning environment factors. The environmental and personal system variables, their individual influence on student development, and the interactive process of environment-person systems on student outcomes are illustrated in the diagram below, which also provides the theoretical framework for the current study.

Figure 1. Adaptation of Moos’ Model of the Relationship between Environmental and Personal Variables and Student Stability and Change. This figure illustrates how the environment and personal variables interact and influence stability and change. “Evaluating Educational Environments: Procedures, Measures, Findings, and Policy Implications,” by Rudolf Moos, 1979, p. 22.
Environmental System Variables

The environmental system consists of four major environmental domains that are interrelated and include the physical setting, organizational factors (i.e., size, faculty-student ratio), human aggregate (i.e., the age, ability level, or socioeconomic background of the total group of students), and social climate (i.e., the psychosocial learning environment). From this perspective, the most influential environmental variables include the physical environment and the social climate. While the physical setting focuses on the tangible attributes of an environment (i.e., classroom seating arrangement), the social climate domain includes relationship dimensions that assess how people relate to each other, personal growth or goal orientation dimensions that focus on how the environment may channel an individuals’ growth, and system maintenance and change dimensions that indicate the level and type of structure within an environment (Moos, 1979, 1994, 2003).

Although each domain influences students’ educational outcomes, Moos (1979) purports that the social climate is determined by and mediates the influence of the physical environment, organizational factors, and human aggregate variables. As an example, the influence of the physical nature of an online learning environment (i.e., Web-based) on student development may be mediated through its effect on the social environment (i.e., increased student autonomy). Additionally, the influence of the human aggregate (i.e., a group of technologically-savvy students) on student development may be mediated through its effects on the social environment, which may include more innovation or flexibility within the environment.
Moos’ Three Social Climate Dimensions

The Relationship dimension, Personal Growth dimension, and System Maintenance and Change dimension describe three aspects of the social climate commonly referred to as the psychosocial learning environment which exists in social settings such as an online course. Available literature details the influence of psychosocial variables on students’ attitudes, cognitive and affective outcomes, and the quality of learning environments in various higher education settings. Giblin and Lakey (2010) investigated mentor-resident relationships and affective outcomes in stressful medical training environments and found that medical residents who reported a high social support or psychosocial mentoring also reported greater performance, medical self-efficacy, and a higher positive affect than individuals who reported low social support or mentoring. Dennen, Darabi, and Smith (2007) found that online students ranked teacher support-related items such as “check email to assess learner needs,” “post to the discussion board,” “provide examples,” “provide timely feedback,” and “respond to student inquiries,” as the top reasons out of sixteen instructor actions that impact student performance and satisfaction (p. 74). Additionally, students in distance education learning environments who reported high levels of instructor support, peer interaction and collaboration, personal relevance, authentic learning, active learning, and student autonomy also reported a greater enjoyment of distance education (Walker & Fraser, 2005).

The Psychosocial Learning Environment and Student Outcomes

There is reason to believe that psychosocial learning environment dimensions correlate with specific learning outcomes. For instance, students in junior high school
science classes that reported the psychosocial learning environment as having a high degree of order and organization, participation and affiliation, or independence also reported higher scores on posttests such as enjoyment of science lessons, adoption of a scientific attitude, and comprehension of scientific reading (Fraser & Fisher, 1982). In short, well-organized science environments are likely to result in a higher enjoyment of learning materials, and those that promote participation are more likely to yield students that think more like scientists. Pearson and Trinidad (2005) redesigned modules in blended learning environments based on differences between college students’ preferred and actual scores on psychosocial learning environment factors such as personal relevance and authentic learning. These findings suggest that beyond describing an environment, the psychosocial learning environment can be manipulated to promote desirable learning outcomes for students.

**Personal System Variables**

The personal system involves the individual characteristics or traits of a student, including socio-demographic variables, expectations, personality factors, and coping skills (Moos, 1979). Socio-demographic variables consist of factors such as age, gender, educational level, or ability level. Expectations refer to a student’s predetermined beliefs and personality factors may include interests and values. Coping skills are the methods that a student may use to manage a particular situation. Additional personal factors mentioned by Moos (1979) include attitudes, roles (i.e., participating as a student), and role concomitants (i.e., participating as a student that is employed). Altogether, Moos (1979) suggests that the differences based on personal factors partially influence the
degree of stability or change that students express in terms of outcomes such as personal interests, level of aspiration, or satisfaction.

*The Influence of Environment-Person Systems on Adaptation and Student Outcomes*

Environmental and personal factors influence whether a student is motivated in an environment, successfully uses his or her coping skills, and reaches desired outcomes. However, the interaction between environmental and personal system variables is the main source of influence for stability and change outcomes in educational settings like online learning environments (Moos, 1979). The relationships between environmental variables such as the psychosocial and online learning environments and personal variables such as student type, attitudes, enjoyment of online education, and self-efficacy are examined in the proposed research study. This model explains the environment-person relationship as a five-step linear process that a student undergoes while participating in a learning environment, as shown in Figure 1.

*Selection Factors*

Environmental and personal systems interact as a student enters into a learning environment based on selection factors based on the environment (i.e., online, face-to-face, subject-specific, introductory or advanced courses) or personal factors (i.e., ability level). For instance, students may complete a course as part of a program requirement. Additionally, this requisite may only allow access to a certain group of students (i.e., clinical psychology graduate students or gifted students). Students may select the environment based on their personal interests or needs (i.e., a foreign language course). Thus, the initial assignment of students to a learning environment begins the relationship between environmental and personal systems.
**Figure 2.** The Relationship between the Online Course and College Student Groups as Proposed Environment-Person Variables and Three Student Outcomes. This figure illustrates the interaction of environmental and personal variables and the stages leading to stability or change in three student outcomes: self-efficacy, enjoyment of online education, and satisfaction of the online environment. Adaptation from “Evaluating Educational Environments: Procedures, Measures, Findings, and Policy Implications,” by Rudolf Moos, 1979, p. 22.

**Cognitive Appraisal**

As students enter into the environment, they make a cognitive appraisal about their ability to participate in the environment (Moos, 1979). Cognitive appraisal is defined as “the individual’s perception of the environment as being either potentially beneficial, harmful, or irrelevant (primary appraisal) and his or her perception of the range of available coping alternatives (secondary appraisal)” (Moos, 1979, pp. 11-12). Students’ self-perceptions and initial perceptions about the environment help to determine the level and source of motivation, or activation and arousal. Activation and arousal, the third stage, is also influenced by the relationship between personal and environmental factors (i.e., some students are less motivated than others; an environment may be less motivating to students than others).
Efforts at Adaptation and Coping

Students use their preferred coping skills to adapt to the environment. Personal factors such as the level of self-efficacy and psychosocial environment factors such as the degree of interaction and collaboration among students are variables that may influence online students’ efforts at adaptation. Lastly, students’ adaptation efforts influence the degree of stability and change, or outcomes, such as values and personal interests, aspiration and achievement levels, mood, and health (Moos, 1979). Importantly, the degree of stability or change is not necessarily a positive or negative outcome. In some cases, stability is more desirable than change and vice versa. For example, a pre- and post-course measure may reveal that an accelerated reader continues to enjoy reading as a daily activity (i.e., stability). In a different setting, a remedial reader who initially reports a low enjoyment of reading may enter into an environment that uses peer collaboration to promote reading, resulting in an increased enjoyment of reading (i.e., change). In the latter example, the reported outcome is a change in enjoyment that is preferred whereas the first reported outcome is a stable degree of enjoyment, which is preferred more than change.

Student Stability and Change

Relative to the current study and within the context of the learner and learning environment, stability or change in students’ self-efficacy, enjoyment of online education, and satisfaction of the psychosocial classroom environment are assessed.

Current Empirical Literature

Following Moos’ (1979) framework, a synthesis of relevant literature resulted in the examination of the online learning environment and college student groups as
environment-person variables. This section includes the literature relating to personal and environmental factors associated with enrollment and persistence in online courses, the online learning course as an environmental system, college student groups as personal systems, and the interaction between college student groups and online learning environments. Moreover, available empirical literature was reviewed that examined the physical and psychosocial domains of the online learning environment and the associations between perceived online classroom environments and student outcomes. Also, this section included available studies that assessed the characteristics, attitudes and behaviors, coping strategies, and self-efficacy of traditional and nontraditional students, followed by a discussion on traditional and nontraditional students in the online learning environment.

*Enrollment and Persistence Trends in Postsecondary Online Education*

Within an eight-year period, postsecondary online student enrollment in the United States increased from 1.6 million to more than 6 million students, or 31% of the total enrollment population who are taking at least one online course in a single semester (Allen & Seaman, 2011). As a whole, the high enrollment growth in online courses is likely attributed to adoption factors such as students’ experience in taking online courses, the introduction of course management systems and Web 2.0 tools, and the general acceptance among stakeholders that online education is a viable alternative to traditional learning environments (Jarrahi, 2010; Morgan, 2003). At an individual level, there are a number of factors that influence students’ selection of online education that in turn may also influence their subsequent appraisal of an environment.
There are a number of reasons why students choose to enroll in online courses including the convenience (i.e., availability of resources and faster response time), connection (i.e., networked to the learning community), and control (i.e., multitasking and controlling the time and place of interactions) that are available with the inclusion of information technology for learning (Ally, 2004; Kvavik & Caruso, 2005). Students’ access and willingness to adapt to technology, knowledge of Internet skills, and academic backgrounds (i.e., fields that incorporate technology use) also play a role in their choice of course format. The choice for online learning is also possibly linked to students’ circadian preferences such as some students working better in the morning while some students learn better at night (Luo, Pan, Choi, Mellish & Strobel, 2011). Additionally, differences in student characteristics also influence undergraduate students’ selection of distance education courses including online classes. Specifically, a higher percentage of older adults, part-time students, working individuals, financially independent students, and students who are married with dependents enroll in online courses (U.S. Department of Education, 2011a).

Students’ selection of online learning also depends on whether or not they have a choice of course format (Luo et al., 2000). Sankaran, Sankaran, and Bui (2000) assessed students’ attitudes to online learning and their selection of either a Web-based or traditional lecture course format, using the same instructor and course content. The results indicate that students who choose to participate in a Web-based course will report a positive attitude toward Web-based learning formats compared to students who select a traditional lecture format. However, students do not always have an option to select the
course format. In any case, the many reasons college students enroll in an online course stems from personal or environmental selection factors.

At the time of the current study, there are no known national reports that indicate the percentage of college students throughout the country who drop out of online courses. But, studies do point out that persistence is typically lower in online courses than in face-to-face courses, and the dropout rates among distance education students have been estimated to be 10-20% higher than the rates of traditional higher education classrooms (Carr, 2000; Hershkovitz & Nachmia, 2011; Holder, 2007; Rovai, 2003). Persistence refers to either the length of time that a student stays in a course or the extent to which a student continues an activity or task in the face of obstacles. The root of persistence problems in online education are difficult to pinpoint. However, there are many reasons that students may decide to drop out of their online courses and various factors that are associated with persistence or drop out in online learning environments (Lee & Choi, 2011).

Available literature reveals that scholars have yet to agree on a measure of persistence or what exactly constitutes student dropout in online education, but studies have been somewhat successful in identifying factors associated with persistence and dropout (Lee & Choi, 2011). Holder (2007) measured persistence among cohorts of online students by comparing the number of classes that students completed in degree-granting online programs, and predictors of persistence were also assessed to distinguish between the persisters and non-persisters. Persisters were students who continued beyond the first three classes of their program, while non-persisters did not continue after three courses. Students classified as persisters made up 80% of the cohorts and scored
higher on measurements of emotional support, self-efficacy, and time and study management than non-persisters. Hershkovitz and Nachmias (2011) measured types of persisters by analyzing the log files of 58 course Websites using the Moodle course management system, which tracked the online activity of 1,189 students and found that 46% of students became inactive or decreased their online activities by the end of the semester. Online activity in the course management program included data such as the number of times a student viewed, added, updated, or deleted content. Additionally, further analysis suggests that differences in online activity persistence types (i.e., low-extent users, late/accelerating users, or online quitters/decelerating users) are influenced by both course characteristics and student characteristics (Hershkovitz & Nachmias, 2011).

An analysis of multiple studies investigating online course dropout factors revealed that student dropout in postsecondary online education is primarily associated with student factors, course/program factors, or environmental factors (Lee & Choi, 2011). Lee and Choi (2011) found that academic performance problems, a lack of academic or professional experience prior to taking online courses, low academic skills or technical skills, an external locus of control, and low levels of self-motivation, self-efficacy, satisfaction with courses, or confidence with computer skills were all identified as student factors that significantly increased the likelihood that a student would dropout. Course dropout factors such as the quality of the course design and the type of student interactions were also significant influences on student dropout. The level of interactivity in a course, relevance to students’ goals, interactions between students and faculty, and students’ level of interaction with the course content were important determinants of
persistence. Work commitments and the level, source (i.e., family, friends, and work), and type (i.e., financial support, emotional support, or comfortable circumstances to study) of support have a significant impact on student retention.

The study also revealed inconsistent findings among studies that measured the influence of demographics such as age or gender on student dropout (i.e., some studies reported significant differences based on demographics, but others did not). Student demographics were not considered as a viable dropout factor (Lee & Choi, 2011). Importantly, the majority of online learners were considered to be older, nontraditional students, which would also insinuate that older and nontraditional students accounted for a large degree of online students who dropped out of online courses. However, if age did not have a significant influence on dropout or persistence, other factors that influence nontraditional students such as self-efficacy, technical skills, support, or confidence in computer skills may have made a difference.

An earlier study conducted by Park and Choi (2009) assessed individual differences and perceptions of support and motivation between 147 nontraditional adult learners from three online courses who either completed or dropped out of their courses. Although the findings did not reveal differences between persistent learners and dropout learners based on individual characteristics (age, gender, and educational background), students’ perceptions of family support, organizational support, and motivational variables (i.e., satisfaction and relevance) in their online course were higher among persistent learners. There were differences in the class mean scores whether independent of persisters or dropouts that suggested course-related factors may have influenced students’ perceptions of family and organizational support, satisfaction, and relevance.
Dropout in online education is a challenge that most colleges and universities will continue to experience because the factors associated with dropout are multi-faceted. In light of online education enrollment trends as Holder (2007) suggests, “would be well spent further quantifying the extent and influence of these variables [associated with persistence decisions]” (p. 257). The current study turns to course-related and student-related factors to identify differences among types of college students’ (i.e., traditional and nontraditional) attitudes in online learning environments and students’ affective outcomes, which may both further advance the discussion on persistence or dropout.

*The Environmental System: Online Learning Environments*

*The physical and psychosocial domains.* Online learning environments are developed through a technological infrastructure of hardware, software, and the Internet as its foundations. Additionally, the individual or combined use of a course Website, social networking group, virtual learning environment, blogging Website, or course management system provides the scaffold for many online teaching and learning environments. Such Web-based courses consist of instructional, administrative, and/or interactive tools that allow students and faculty to work together as members of a learning group.

Some instructors use course Websites alongside other Web-based tools or as a supplement to conventional learning environments as a means to provide students with supplementary access to resources. Course Websites provide an opportunity for a high level of customization because the professor usually builds, maintains, and updates the site, which requires more time, effort, and technical skills compared to other instructional delivery formats (Witt, 2003). Social networking groups, blogs, and virtual learning
environments are a part of the Web 2.0 instructional tools that have been used to improve interactions between students and instructors and students’ affective outcomes. For instance, students reported that tools such as Second Life and Facebook improved their innovation and motivation while participating in collaborative projects with their peers (Sutcliffe & Alrayes, 2012). A course management system, or CMS, is an out-of-the-box Web-based software collection that typically features communication tools (i.e., emailing, discussion board, or synchronous chat), productivity tools (i.e., calendar, teacher announcements), student involvement tools, administration tools (i.e., course authorization), course delivery tools (i.e., grade book, student tracking), and content design tools (Features List, 2012). This software is referred to as learning management systems (LMS), e-learning systems, or online learning management systems.

Course management systems have become almost synonymous with online learning environments in higher education, and approximately 67% of public universities and 51% of community colleges reported the adoption of some type of Web-based system to manage, design, and deliver their online courses (Gibbons, 2005; Green, 2011; Ioannou & Hannafin, 2008; Jarrahi, 2010). Much of the expansion in online education can be attributed to the use of course management systems, which provide a template to build an online learning environment and allow content to be transferred by the novice instructor who may have little experience using hypertext markup language, or HTML, a language used to display Web pages or content online (Hu & Wang, 2008). CMSs initially grew organically on college campuses, but many were later commercialized for businesses and schools. Open-source courseware systems are also used as a substitute to commercial products because they are less expensive and have fewer licensing
restrictions. Some of the most widely used CMSs are either commercial or open-source and include Blackboard, Moodle, Desire2Learn and Sakai, and systems such as Epsilen, Instructure, and Loudcloud have recently entered the learning management system market (Green, 2011). The design and development of online learning environments help to establish the physical setting and depends on organizational and personal factors that involve college professors, support staff, university administrators, and students. Additionally, the level of online teaching experience, technological skills, and preferences of the course instructor influence specific learning activities and tools that are implemented in an online course, which in turn influence the physical setting and psychosocial learning environment.

Palmer and Holt (2010) measured the value of a range of online learning environment elements at an Australian university by identifying students’ reported attitudes of importance and satisfaction with 15 elements. Importance and satisfaction scoring scales ranged from 1 to 7, or from low importance or low satisfaction to high importance or high satisfaction. The mean scores were taken among a diverse sample of 2,526 students in various disciplines who were using the college’s course management system. The researchers found that students rated elements such as accessing lecture notes/tutorial notes/lab notes, viewing marks (i.e., grades), receiving feedback on assignments, accessing unit guides/unit information, and submitting assignments as highly important (i.e., mean score of 6 or above). Students reported the highest degree of satisfaction with accessing unit guides (i.e., 5.19) and lecture notes (i.e., 5.01). Students were moderately satisfied with submitting assignments (i.e., 4.58) and viewing marks (i.e., 4.27) and least satisfied with receiving feedback on assignments (i.e., 3.86). The
findings suggest that students consider online learning environments beneficial or satisfactory, in terms of the basic elements of the CMS, namely accessing course content. However, the study found that activities that are designed to support students’ learning, including providing feedback, are also essential in the learning environment and promote positive student outcomes.

Mullen and Tallent-Runnels (2006) assessed graduate students in online and face-to-face courses and found that online students’ perceptions of their instructors’ academic support (i.e., “providing clear instructional strategies, corrective feedback, and stressing student learning”) were strongly and positively related to students’ satisfaction with the course, perceptions of learning, and task value, more so than their counterparts (p. 258). Additionally, their study suggests that experienced online undergraduate faculty and student panels rated the criticality of competencies for effective online teaching (Bailie, 2011). Specifically, participants were asked to rate the importance of 19 online teacher competencies such as feedback skills, content knowledge, organizational skills, interpersonal communication skills, writing skills, adult learning theory, and knowledge of distance learning. A comparison between student and faculty mean score ratings revealed that feedback skills, interpersonal communication, student engagement techniques, and content knowledge were equally agreed upon as important online teacher competencies. Thus, it can be assumed that faculty and students place a high value on relationship-related factors in online learning environments, including both instructor-student(s) and student-to-student relationships.

Palmer and Holt (2010) also found that students rated learning environment elements involving student-to-student relationships (i.e., working collaboratively in a
group, contacting other students via internal unit messaging, and contributing to
discussions) with moderate importance and satisfaction. On the other hand, they found
that students rated elements such as the use of chat and/or whiteboard with low
importance and satisfaction, which is an expected finding considering the reasons that
students select online learning environments.

Song, Singleton, Hill, and Koh (2004) found that while most students reported
technical problems as challenges to online learning; students who were less satisfied with
online learning than others also reported a perceived lack of sense of community. Sense
of community refers to students’ feelings of connectedness or belonging to a group in the
environment and is especially a challenge for students in online learning environments.
Graduate students taking online courses reported feeling a weaker sense of connectedness
or community in their online course than in their on-campus courses (Rovai, Wighting, &
Liu, 2005). Also, several themes were identified in a focus group study that assessed
nursing students’ experiences associated with sense of community in online learning.
Gallager-Lepak, Reilly, and Killon (2009) found that having a class structure to promote
group discussions, required student participation, teamwork, computer access and use,
interacting with classmates to identify commonalities, a mutual exchange of feedback,
and informal discussions were among activities that contribute to students’ reported
feelings of connectedness in their online courses. Further, they reported that moderate
levels of student engagement activities can significantly impact how well students learn.
Lundberg (2003) found that peer-to-peer teaching and learning activities were the
strongest predictors of nontraditional student groups’ understanding of science compared
to individual learning activities, even when students’ reported less frequent peer teaching
interactions. Taken together, teachers’ support of student interactions and collaborations, students’ initiatives to interact with classmates, and their access to and comfort level in using technology improves perceptions of sense of community, which in turn, decreases the likelihood that students feel isolated in an online course (Gallager-Lepak et al., 2009).

An abundance of literature addresses college students’ appraisal of various aspects of the physical online environment such as the use of different types of instructional or communication tools and the impact of course management systems on student learning. Importantly, the psychosocial learning environment is influenced by and mediates other environmental domains including the physical setting (Moos, 1979). For example, the use of such tools and instructional design of learning activities influence the psychological and social aspects of an environment, which impact student attitudes and behaviors such as student motivation, perception of sense of community, or overall satisfaction. Thus, both the physical setting and social climate of an environment are important determinants of student outcomes.

The vast majority of available literature does not directly address college students’ appraisal of their psychosocial learning environment, and others focus on one aspect of the social climate (Gallagher-Lepak et al., 2009; Revere & Kovach, 2011; Rovai, Wighting, & Liu, 2005). Until recently, the psychosocial learning environment in postsecondary online education classrooms has not been assessed as a whole when considering each dimension of the social climate (Walker & Fraser, 2005). Further, the available literature indicates the types of psychosocial characteristics that are relevant to online learning environments in higher education (i.e., teacher support, equity, personal relevance, authentic learning, asynchronicity, computer usage), and a small number of
studies appear to have used such indicators to enhance the design of online learning environments based on students’ attitudes (Pearson & Trinidad, 2005; Trinidad, Aldridge, & Fraser, 2005). There remains a void in the literature that addresses college students’ attitudes about their psychosocial learning environments, its impact on student outcomes in online learning courses, and whether differences that exist between college student groups influence perceptions of the environment. The following section addresses the relationship among the classroom environment, attitudes, and student outcomes.

*Perceived Classroom Environment and Student Outcomes*

The available literature purports that students’ appraisal of the psychosocial learning environment accounts for marked differences associated with various student outcomes at all levels of education and beyond general ability (McRobbie & Fraser, 1993). The psychosocial characteristics of a learning environment are as different as the types of classroom environments that exist. For instance, McRobbie and Fraser (1993) determined that student cohesiveness, open-endedness, integration (i.e., the laboratory activities integrate with other activities), rule clarity (i.e., the extent of formal rules), and material environment (i.e., adequacy of laboratory equipment/materials) are psychosocial characteristics of science laboratory classrooms in secondary education. Trickett and Moos (1973) used students’ and teachers’ shared perceptions of junior high and high school classrooms to determine important psychosocial characteristics such as involvement (i.e., student attentiveness), affiliation (i.e., friendship and helping), teacher support, competition (i.e., level of competition in the classroom for grades and recognition), and rule clarity (i.e. extent that rules exist and/or following rules; understanding consequences of breaking rules). The combined variables make up a
psychosocial learning environment, and the perception of such characteristics is an essential factor that has been used to explain differences in both cognitive and affective outcomes. The proposed study primarily focuses on students’ affective outcomes. Huang (2012) measured the relationship between learning environments in higher education and students’ academic aspirations and satisfaction among 12,423 college students from 42 universities in Taiwan. Specifically, the study compared students’ reported attitudes about postsecondary learning environment characteristics to their reported degree of commitment toward achieving academic goals and general satisfaction with the institution. Huang’s study identifies seven learning environment characteristics were categorized according to Moos’ (1979) social climate dimensions. Relationship dimensions included student cohesiveness and faculty-student relations. Personal growth dimensions involved language abilities (i.e., the extent that “the university is helpful in strengthening student abilities in writing, reading, and speaking Chinese and/or foreign languages”) and emotional development (i.e., “fostering self-discipline, problem solving capabilities, and emotional maturity”) (p. 368). System maintenance and change dimensions consisted of administrative support, library resources, and student services (Huang, 2012).

Huang (2012) found that attitudes toward faculty-student relations were especially related to academic aspirations, following an intra and inter institutional analysis of students’ attitudes. Moreover, he recognized that attitudes toward emotional development, language abilities, and student services also correlated with student academic aspirations. While controlling for background variables (i.e., gender, living arrangements, amount of part-time work, family income, and parental education), Huang
noted that the combination of learning environment characteristics was positively
correlated with students’ satisfaction of their institutions. An additional analysis
indicated that emotional development and library resources were related to students’
satisfaction across college campuses. A large degree of variance in satisfaction (i.e.,
72%) and almost one third of the variance in academic aspirations were accounted for by
the seven environmental characteristics, which was an important finding considering that
a number of studies have indicated that satisfaction was also associated with issues of
motivation and persistence (BC College & Institute Student Outcomes, 2003; Bean &
Metzner, 1985; Huang, 2012; Keller, 2010). Faculty-student relationships, students’
emotional development, and library resources were particularly important aspects of
postsecondary institutions’ learning environments that, if improved, also improved
students’ academic aspirations and overall satisfaction with their college or university.

While assessing students in 39 elementary mathematics classrooms, Goh, Young,
and Fraser (1995) found that relationships existed between psychosocial characteristics
and two student outcomes (i.e., math attitudes and math achievement). Four learning
environment characteristics were used in their study that followed Moos’ classification.
Cohesion and Friction were the relationship dimensions they defined as the “degree to
which students feel a sense of belonging/pride/identity” and the “degree to which
students do not get along and are unfriendly to one another,” respectively (p. 31).
Competition is a personal growth variable they defined as the “degree to which students
compete with classmates.” Task Orientation, a system maintenance and change variable,
is defined as the “degree to which students are orderly and complete work on time” (p.
31). Their multiple linear regression analysis indicated that Cohesion, Friction, and Task
Orientation independently accounted for differences in students’ attitudes about math (Goh, Young, & Fraser, 1995). Thus, they argue that the degree that a student fits well into the class group, gets along with other students, and perceives an appropriate level of organization in the classroom also predicted whether or not he or she likes mathematics. Additionally, their analyses revealed that friction primarily accounted for differences in student achievement. Therefore, it can be determined that less friction is associated with high levels of math achievement.

A diverse sample of 325 secondary and postsecondary education students in e-learning groups participated in an online survey identifying attitudes about eight psychosocial characteristics of e-learning environments (i.e., computer usage, teacher support, student interaction and collaboration, personal relevance, authentic learning, student autonomy, equity, and asynchronicity) (Trinidad et al., 2005). Trinidad et al. (2005) conducted online interviews and reviewed course-related materials with a small group of students to triangulate the data. Relative to student outcomes, the researchers found that psychosocial characteristics, particularly computer usage, teacher support, authentic learning, student autonomy, and asynchronicity were positively and independently related to students’ enjoyment of e-learning. These qualitative assessments revealed positive attitudes about students’ learning environment experiences. Walker and Fraser (2005) also assessed the relationship between psychosocial characteristics in postsecondary distance education environments and enjoyment of distance education by distributing online surveys to 680 college students taking fully-online courses. The findings revealed that the appraisal of instructor support, student interaction and collaboration, authentic learning, student autonomy and especially
personal relevance were positively and independently associated with students’ enjoyment of distance education.

The psychosocial learning environment also appears important in strengthening or weakening students’ efficacy expectations. Fisher, Aldridge, Fraser, and Wood (2001) used quantitative and qualitative data to examine the relationship between high school students’ attitudes towards their learning environment (i.e., technology rich and outcomes-focused classrooms) and academic efficacy beliefs. Nine psychosocial environment characteristics including student cohesiveness, involvement, investigation (i.e., environment places emphasis on skills and processes of inquiry), task orientation, cooperation, equity (i.e., equal treatment from teacher), differentiation (i.e., treatment based on ability, rates of learning and interests), computer usage, and young adult ethos (i.e., students are treated as young adults) were used to assess students in 33 classrooms (Fisher, Aldridge, Fraser, & Wood, 2001). The findings conclude that academic self-efficacy is positively related to students’ appraisal of the learning environment. Further analysis between classroom environments indicates that the psychosocial characteristics associated with academic efficacy include involvement, investigation, differentiation, and computer usage. Among students, task orientation, investigation, and differentiation characteristics account for a significant degree of variance in academic self-efficacy.

The Personal System: College Student Groups

Being a traditional or nontraditional student. Age has been used as a primary indicator to determine whether a college student is considered traditional or nontraditional (Center for Law and Social Policy, 2011). Typically, students are considered traditional when they are between the ages of 18-24 and nontraditional when
they are older and enrolled as an undergraduate student, usually at least 25 years of age. Considering that age alone broadly accounts for a number of circumstances that older adults may encounter, additional indicators of student groups have been used such as enrollment patterns, financial and family status, and high school graduation status, or the type of social roles and self-perception of the student role (Kim, Sax, Lee, & Hagedorn, 2010; Merriam & Brockett, 1997; U.S. Department of Education, 2002; U.S. Department of Education, 1996). The differences in nontraditional and traditional student characteristics also account for the variation between students’ behaviors and attitudes such as enrollment and persistence patterns, engagement styles, students’ self-perception, and coping strategies (Gilardi & Guglielmetti, 2011; Johnson & Nussbaum, 2012; U.S. Department of Education, 2002).

**Characteristics of traditional and nontraditional students.** The U.S. Department of Education’s Center for Education Statistics (1996) asserts that a nontraditional student will identify with at least one of the following seven characteristics: delayed enrollment (i.e., older than typical age of each undergraduate classification year; did not enter college in the same calendar year of high school graduation), part-time enrollment, financial independence, full-time employment while enrolled, has nonspouse dependents, single parent, or did not receive a standard high school diploma. Based on the number of reported characteristics, students are classified as either minimally (i.e., 1), moderately (i.e., 2 or 3), or highly (i.e., 4 or more) nontraditional, whereas traditional students do not report any characteristics (U.S. Department of Education, 1996). Table 1 includes a summary of the differences between traditional and nontraditional students’ characteristics.
Table 1

*Characteristics of Traditional versus Nontraditional College Student Groups*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Traditional Students</th>
<th>Nontraditional Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Between the Ages of 18-24</td>
<td>At Least 25 Years of Age</td>
</tr>
<tr>
<td>Enrollment Patterns</td>
<td>Begins College after High School</td>
<td>Delays Enrollment</td>
</tr>
<tr>
<td>Enrollment Status</td>
<td>Full-time</td>
<td>Part-time</td>
</tr>
<tr>
<td>Financial Status</td>
<td>Financially Dependent</td>
<td>Financially Independent</td>
</tr>
<tr>
<td>Employment Status (while enrolled)</td>
<td>Part-time or No Employment</td>
<td>Full-time Employment</td>
</tr>
<tr>
<td>Family Status</td>
<td>No Dependents</td>
<td>Has Nonspouse Dependents</td>
</tr>
<tr>
<td>Single Parent</td>
<td>No Dependents</td>
<td>Not Married and Has Nonspouse Dependents</td>
</tr>
<tr>
<td>High School Graduation Status</td>
<td>Received a Standard High School Diploma</td>
<td>Received a GED or High School Equivalent or Certificate of Completion</td>
</tr>
</tbody>
</table>

Although the majority of previously mentioned factors may appear to lean towards the assumption that the nontraditional student is older, these indicators are relevant to both older and younger students, even though younger students report fewer characteristics (U.S. Department of Education, 1996). For instance, the results of the 2010 United States Census Data indicates that there were approximately 21.1 million reported single parent households (i.e., 15.3 million female and 5.8 million male householders) in the United States, and approximately 2.2 million were 24 years old or younger (U.S. Census Bureau, 2011, 2012).
The available literature suggests that students’ financial status is determined by either federal income tax criteria (i.e., from a parent or the student) or federal financial aid criteria; still, the financial aid criteria provide a more specific set of measures that include age and is helpful in determining whether a student is financially dependent or independent (U.S. Department of Education, 1996).

According to the Free Application for Federal Student Aid or FAFSA, a student is financially independent if he/she meets any of the following criteria: older than 23; married; enrolled in a graduate degree or certificate program; serving on active duty or is a veteran of the U.S. Armed Forces; has children who receive more than half of their support during the financial aid year; has dependents other than children or spouse who receive support; has deceased parents, was placed in foster care, or is a dependent or ward of the court at or after 13 years old; is an emancipated minor; in legal guardianship; and an unaccompanied youth who was homeless as reported by the students’ high school or the U.S. Department of Housing and Urban Development (U.S. Department of Education, 2012). Overall, students’ reports of such characteristics have been important in identifying traditional or nontraditional student groups, the degree that a student is nontraditional, and the differences that exist between groups (U.S. Department of Education, 1996).

Students’ reported self-perceptions of their role as a student or number of social roles has also been used to describe student group characteristics. Kim et al., (2010) found that traditional students perceived themselves as either students only or students who are employees, whereas nontraditional students are far more likely to perceive themselves as employees who are students or parents who are students. Social role refers
to the position that an individual performs as a member of a social group (McLeod, 2008). There are a range of social roles that individuals may serve in at any given time, but nontraditional students may have multiple social roles at the same time (i.e., employee, parent, spouse, community member/volunteer, and student). On the other hand, traditional students may have fewer roles with fewer responsibilities while in these roles. When individuals are unable to adequately prioritize their life roles due to time demands or other constraints, multiple role strain is likely to occur (Riley, 1991).

In general, role strain occurs when an individual’s responsibilities begin to compete with each other (i.e., role conflict) or when there is not enough time to meet all of life’s role demands (i.e., role overload). Studies indicate that contemporary women and nontraditional female students with children are more likely to experience psychological distress due to multiple role strain, while other reports suggest that multiple roles among women or men, “enhance an individual’s resources, social connections, power, prestige, and emotional gratification” (Ahrens & Ryff, 2006, p. 802; Erdwins, Buffardi, Casper, & O’Brien, 2001; Quimby & O’Brien, 2006). Nevertheless, the number of social roles and self-perceptions of the student role are additional indicators that are useful in identifying nontraditional or traditional college student groups.

There are also differences between traditional and nontraditional student groups concerning enrollment patterns, attitudes about combining work and school, distance education, persistence and degree attainment rates, and coping strategies (Johnson & Nussbaum, 2012; Kim et al., 2010; Morris, Brooks, & May, 2003; U.S. Department of Education, 2002). Table 2 provides a summary of the differences between traditional and nontraditional students’ attitudes and behaviors.
Table 2

*Attitudes and Behaviors of Traditional versus Nontraditional College Student Groups*

<table>
<thead>
<tr>
<th>Factors</th>
<th>College Student Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional Students</td>
</tr>
<tr>
<td>Enroll by College Type</td>
<td>Enroll in both 2-year and 4-year institutions</td>
</tr>
<tr>
<td>Attitudes about work and school</td>
<td>Consider themselves students only or students who work</td>
</tr>
<tr>
<td>Course Format</td>
<td>Enroll in traditional formats</td>
</tr>
<tr>
<td>Persistence/Attainment</td>
<td>More attain a degree within five years</td>
</tr>
<tr>
<td>Coping Strategies</td>
<td>Use more emotion-oriented and avoidance coping strategies</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Implications of greater computer-related self-efficacy</td>
</tr>
</tbody>
</table>

Kim et al. (2010) found that nontraditional students perceive themselves as employees who were students or parents who were students, whereas traditional-aged students were more likely to perceive themselves as either students only or students who were employees. Individuals who perceive themselves as students only are younger, report spending more time on campus, watch more television, and engage in more relationships with other students outside of coursework. Moreover, students who perceive their role as a student who is an employee report a higher level of degree aspirations, spend almost as much time on campus as students only, and indicate a higher likelihood to skip a class. Students who perceive their role as primarily an employee,
however, report more job-related responsibilities, work more hours per week, and spend the least amount of time on campus. Students’ overall choice of distance education is also associated with group characteristics and work-school related issues. Also, the U.S. Department of Education (2002) found that more nontraditional students enrolled in distance education courses. Additionally, the study revealed that moderately and highly nontraditional students were more likely to enroll in distance education programs compared to other students.

The longitudinal study assessed cohort groups of students, their persistence across three years, and degree attainment within five years (U.S. Department of Education, 2002). Relative to persistence, a higher percentage of nontraditional students (i.e., 50% of highly nontraditional, 42% of moderately nontraditional, and 23% of minimally nontraditional) were no longer enrolled nor pursuing a bachelor’s degree when compared to traditional students (i.e., 12%). The same trend was evident among students pursuing an associate’s degree or certificate. Another trend found that more traditional students attained a degree or certificate within five years compared to nontraditional students, and highly nontraditional students were less likely to attain their objective than all students. Therefore, it can be assumed that a higher number of nontraditional student demographic characteristics places students at a greater risk for falling short of their educational goals, in regard to persistence and completion of degree or certificate programs.

*Coping strategies of traditional and nontraditional students.* Studies suggest that nontraditional students use different coping strategies in dealing with life challenges compared to traditional students (Johnson & Nussbaum, 2012; Morris et al., 2003). Students’ use of coping skills is an important aspect of adaptation efforts in a learning
environment (Moos, 1979). Available literature denotes three types of coping strategies that individuals employ including task-oriented, emotion-oriented, and avoidance coping (Endler & Parker, 1999a). Task-oriented and emotion-oriented coping strategies are proactive, as an individual will either try to eliminate the stress by directly focusing on the problem or they become self-focused and exhibit emotional responses in an attempt to reduce stress, respectively (Endler & Parker, 1999b; Kariv & Heiman, 2005). Avoidance coping consists of two types of behaviors: distraction or social diversion. Individuals may cope through avoidance strategies by deliberately evading the stressor, going into a state of denial, losing hope, or creating distractions to reduce stress (i.e., going shopping or spending time with friends). Endler and Parker (1999a) claim that “individuals [taking the Coping Inventory for Stressful Situations] who score high on Task Oriented Coping use behavioral or cognitive problem-solving techniques when confronted with stress. Emotion Oriented Copers respond to stressful situations with emotional outbursts, self-preoccupation, or fantasy. Avoidance Copers rely on social supports or distract themselves with other activities” (para. 3). Thus, it can be determined that task-oriented coping is considered a more effective strategy for handling academic-related stress (Johnson & Nussbaum, 2012).

Johnson and Nussbaum (2012) assessed 178 undergraduate students (i.e., 94 traditional and 84 nontraditional students) and their reported use of either task-oriented, emotion-oriented, or avoidance coping. On average, nontraditional students scored higher on task-oriented coping measures compared to traditional students who scored higher on emotion-oriented and avoidance coping. Kariv and Heiman (2005) also found similar results between older and younger students. Their finding suggests that nontraditional
students are better able to use coping strategies to adapt to learning environments, more so than traditional students. One of the reasons that nontraditional students employ more problem-focused strategies than traditional students may relate to how each group is affected by stress. Specifically, research indicates that older age is associated with lower levels of perceived stress (Kariv & Heiman, 2005). Thus, Kariv and Heiman conclude that older students may be more prone to resolving issues that others may consider stressful rather than exhibiting self-blame or avoiding the issue altogether.

*Self-efficacy and students’ coping efforts.* Self-efficacy Theory was introduced by Bandura (1977) to analyze the relationship between cognitive and behavioral change. This theoretical framework involves the cognitive appraisal of information to determine whether or not a person believes that he or she is capable of producing an expected outcome (Bandura, 1977). Bandura (1977) postulates that self-efficacy can influence an individual’s “choice of activities and settings, [and] through expectations of eventual success, it can affect coping efforts once they are initiated” (p.194). For example, a student who has stronger self-efficacy in reading may readily participate in a school spelling bee compared to students who have a weaker reading self-efficacy. Likewise, students who possess a stronger self-efficacy in technology and computers may readily enroll in a computer science program or take online courses. As these students begin to face more difficult tasks (i.e., complex spelling words), their expectancies of success motivate them to acquire and utilize additional coping skills such as increasing the level of effort required to maintain success (i.e., reading a dictionary or finding a tutor). The general nature of self-efficacy theory lends itself to diverse situations and settings (Bandura, 1977). As a result, expected outcomes vary and could include behavioral
changes such as overcoming fears and phobias, reducing anxiety, improving exercise behaviors, learning to swim, developing better study habits, using a computer, or staying in school.

Through students’ personal and environmental cognitive appraisals, self-efficacy may serve as a personal resource or vulnerability factor that interacts with the learning environment. Bandura (1977) confirmed that efficacy expectations “determine whether coping behavior will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences” (p. 191). Self-efficacy is also positively related to college adjustment (Ramos-Sánchez & Nichols, 2007). Therefore, a person’s judgment of his or her capabilities act as either a personal resource or vulnerability, which in turn, establishes the groundwork for behaviors that lead to success or failure such as persistence or dropout (Bandura, 1986; Jerusalem & Mittag, 1997).

Although there are no known studies that specifically address differences between college student groups’ academic or online learning self-efficacy, available literature implies that differences may exist. For instance, Spitzer (2000) found that academic and career decision-making self-efficacy were predictors of college students’ academic success (grade point average), and career decision-making self-efficacy and nontraditional students demonstrated higher GPAs and greater self-efficacy in career decision-making. Also, changes in online graduate students’ computer-related self-efficacy were measured across a semester, and younger (i.e., 22-39 years old) adult students demonstrated a higher degree of self-efficacy improvement than older (i.e., 40-57 years old) students (Chyung, 2007).
Muilenburg and Berge (2005) explored student perspectives of barriers to online learning and identified factors that affected students’ ratings of barriers. Related barriers include administrative issues, social interaction, academic skills, technical skills, learning motivation, time and support for studies, cost and access to the Internet, and technical problems. Importantly, factors such as self-efficacy (i.e., students’ ability and confidence with online learning skills) and age were among factors that affected students’ rating of barriers, though the study did not specifically assess differences between student age groups and self-efficacy. Yet, the findings indicate that as age increases the barriers to online learning decrease. Also, undergraduate students rated online learning barriers higher compared to graduate students. Because nontraditional students have been loosely defined in self-efficacy studies, more research is needed to determine whether student groups exhibit dissimilarities in levels of self-efficacy, particularly in their online courses.

**College Student Groups and the Online Learning Environment**

There are distinguishable characteristics between traditional and nontraditional students beyond demographic variables. Student groups have different attitudes and behaviors associated with their work and school life and unique views about student roles. Students also contrast in their financial circumstances and lifestyle, including the number of social roles and level of responsibilities that are held. Persistence problems are prevalent among students who share nontraditional student characteristics. Further, nontraditional students are more at risk for dropping out of their undergraduate programs in the first year of enrollment but seem to utilize more effective coping strategies than traditional students. Currently, there is no known research that describes whether such
differences between traditional and nontraditional students influence self-efficacy or attitudes in online classrooms.

Summary

Higher education attainment in the United States has been a fundamental right that leads to the economic success (i.e., higher paying jobs with higher skills) and empowerment of individuals, which also affect the local, national, and global economy. However, a number of obstacles exist for adult learners who desire to reach such goals. In pinpointing factors that influence persistence, the U.S. Department of Education (2002) found that “delaying enrollment, enrolling part time, being financially independent, and having a GED or other certificate of completion” are directly associated with persistence problems (p.18). Additionally, “working full time in the first year of enrollment” or “having dependents” is indirectly associated with persistence, and most nontraditional students are at risk for dropping out of their program within the first year of enrollment” (p.18).

Efforts at the federal, state, and institutional levels are being combined to propose ways to assist nontraditional students in the completion of their higher education programs, which attests to the urgency of this issue (Advisory Committee on Student Financial Assistance, 2012). Additionally, experts estimate that in order to reach the 2020 higher education attainment goal of “to lead the world with the highest proportion of college graduates” set by the Obama Administration, 70% of college degrees must come about by providing better education to adult students, especially when targeting adults between the ages of 25 and 34 (ACSFA, 2012, p. 1). Some of the recommendations from panelists focus on revisiting the financial aid systems, creating
additional opportunities for flexible learning environments, determining and measuring new learning outcomes, developing career pathways to move nontraditional students along a continuum toward advanced in-demand jobs, providing mentors and additional support staff, creating student cohort programs, providing additional financial support to faculty members to assess student learning, and implementing accurate systems to track enrollment patterns of nontraditional learners (ACSFA, 2012).

The current chapter primarily discusses trends in online education enrollment, issues of persistence in higher education, online learning environments, and learning environment factors that influence student outcomes. However, the major premise of the proposed research study is to identify nontraditional students’ perspectives at the course level by assessing the psychosocial characteristics of their online classroom environments. Thus, the distinctions between nontraditional and traditional college student groups will be reviewed, as this chapter proposed a fundamental need in determining whether there are differences between college student groups’ self-efficacy and perspectives of learning environments. The literature review also includes a discussion on Moos’ (1979) theoretical framework, which has been used in numerous studies to describe classroom social climates. Additionally, the framework explains the relationship between personal variables and environmental characteristics, the appraisal of person-environment factors, and outcomes. Specifically, the proposed study employs this framework to examine two college student groups, their interaction with psychosocial characteristics in online learning environments, and affective outcomes that include enjoyment of online learning, changes in online learning self-efficacy, and
student satisfaction. The following chapter provides the research methods proposed to assess student attitudes in online learning environments.
CHAPTER III
METHODOLOGY

Introduction

The research methodology details the source and number of study participants, research design, description of research instruments, research study procedures, and data analyses that were used to examine college students’ attitudes toward the psychosocial learning environments in their online courses, self-efficacy, enjoyment of online learning, and student satisfaction. The purpose of the research study was to investigate nontraditional students’ attitudes toward eight dimensions of the psychosocial learning environment in online courses and to examine the relationships between their perceived learning environment and affective outcomes. The study also distinguished between nontraditional and traditional college student groups to determine whether being a nontraditional student influenced such attitudes.

The planned research analysis included multiple analyses used to help assess pretest and posttest differences between traditional and nontraditional students’ attitudes, self-efficacy, enjoyment of online learning, and student satisfaction. The analyses also helped to determine the relationships between psychosocial learning environment attitudes, self-efficacy, and the enjoyment of online learning.

Participants

The study targeted undergraduate students who were at least 18 years old and enrolled in online courses at a university located in the southeastern United States. A listing of online courses, which was obtained from the university’s Office of the Registrar Webpage, contains information regarding the course name and format, catalog number, instructor, and the total number of students who have enrolled in the online course.
Initially, undergraduate (i.e., 100-400 level catalog numbers) course sections that were taught exclusively at the university and entirely online were targeted. However, students were contacted indirectly using three methods: (1) from the online listing, Department Chairs were emailed the survey announcement to distribute to faculty teaching online courses during the semester, (2) a survey announcement was submitted to the University’s Office of Communications and mass distributed to all faculty and students, and (3) the researcher contacted faculty teaching online courses to distribute the survey to students.

Within a semester, a total of 151 undergraduate students from various academic disciplines participated in the study, including 129 students who completed the pretest survey and 22 students who were first-time participants that completed the posttest survey. While students were encouraged to complete the pretest and posttest surveys, only 63 individuals returned the posttest survey. Therefore, 129 students were included in the analysis of pretest data, 85 students were included in the analyses of posttest data, and the analysis of pretest and posttest differences included 63 individuals. Compared to other disciplines, more online students who were majoring in Nursing, Business Administration, Construction, Construction Engineering Technology, Criminal Justice, Family Studies, Interdisciplinary Studies, and Psychology programs participated in the study.

Research Design

Using a pretest/posttest method, a comparative and correlational design was used to investigate the research questions and included multiple survey instruments. The comparative design consisted of two independent variables, namely college student
group, students’ undergraduate classification, and experience taking online courses prior to the current class. Respective levels of independent variables include the following: traditional and nontraditional students; freshmen, sophomores, juniors, and seniors; and, no experience, one to two classes, three to four classes, and five or more classes. Based on the number of nontraditional student characteristics, research participants were grouped as either traditional or nontraditional students, and nontraditional students were further identified as being minimally, moderately, or highly nontraditional.

The correlational design was used to assess the relationships among variables including the associations between students’ self-efficacy and attitudes toward the psychosocial learning environment, the associations between enjoyment of online learning and attitudes toward the psychosocial learning environment, and the associations between self-efficacy and enjoyment of the online learning environment.

Instruments of Data Collection

Along with student demographic information, the research instrument measured five variables: students’ attitudes toward the psychosocial learning environment, their level of academic self-efficacy, their level of self-efficacy as an online student, their level of enjoyment of online learning, and their college student group (i.e., whether they were considered traditional or nontraditional). Multiple scales were used to complete this study, and each scale is discussed further in the following paragraphs (see Appendix A for the pretest and posttest surveys).

*Online Learning Environment Survey (OLES)*

After reviewing scales that measure students’ appraisal of psychosocial characteristics in learning environments, the researcher obtained permission to use the
Online Learning Environment Survey (OLES) because the items are organized according to Moos’ (1979) social climate domains (see Appendix B for written requests and author permission to reproduce research survey instruments). Additionally, the use of OLES proved a more suitable instrument for the current study, being one of the few surveys that are designed to assess the psychosocial characteristics of online learning environments at postsecondary institutions (Pearson & Trinidad, 2005). Also, two forms of the OLES, which measured the preferred and actual psychosocial learning environment, were combined to analyze student satisfaction.

The OLES’ forms measure the degree to which the eight psychosocial characteristics are preferred and actually present in the online learning environment and include the following: Computer Usage (CU), Teacher Support (TS), Student Interaction and Collaboration (SIC), Personal Relevance (PR), Authentic Learning (AL), Student Autonomy (SA), Equity (EQ), and Asynchronicity (AS). Sample items include: “I use the computer to take part in online discussions with other students;” “If I have an inquiry, the teacher finds the time to respond;” and “I can relate what I learn to my life outside of this class.” An Enjoyment Scale (EN) is also included in the OLES and is used in the proposed study to determine whether there is a relationship between the perceived learning environment and students’ enjoyment of online education as well as to identify specific psychosocial characteristics that are associated with high enjoyment. Sample items include: “I prefer online learning” and “Online learning is worth my time.” Altogether, 54 items are measured using a five-point Likert scale that ranges from almost never (1) to almost always (5).
The internal consistency reliability for the abovementioned scales is high and ranges from 0.89 to 0.96 for the preferred version and from 0.86 to 0.96 for the actual version, which are considered satisfactory (Trinidad et al., 2005). The Enjoyment Scale also has a high internal consistency reliability of 0.96 (Trinidad et al., 2005). The researcher will compare the posttest preferred environment scores and posttest actual environment scores from the OLES to determine whether students’ preferred score aligns more closely with their actual score of the environment, which indicates the level of satisfaction. Whereas less variation between the scores indicates a higher level of satisfaction, more variation between the scores indicates a lower level of satisfaction. This method is considered a satisfactory measure of student satisfaction when accounting for learning environment attitudes.

**Self-Efficacy**

Permission was granted to use two self-efficacy instruments. These include Chemers, Hu, and Garcia’s (2001) academic self-efficacy scale, which measured students’ efficacy expectations about being a college student and Bates and Khasawneh’s (2007) Online Learning Technology Self-Efficacy scale, which measured students’ efficacy expectations about using online learning technologies (see Appendix B). Information from both measures was used to compare the student groups’ level of self-efficacy and determine the association between self-efficacy and perceived learning environment.

The academic self-efficacy scale was chosen because the measure specifically assesses students’ confidence in their ability to perform well at college-level academic tasks. Also, other known measures seemed to focus on confidence in specific subjects or were less appropriate for postsecondary education students. The scale consists of eight
items that are measured using a seven-point Likert scale, which ranges from very untrue (1) to very true (7). Sample items include: “I know how to schedule my time to accomplish my tasks” and “I know how to study to perform well on tests.” The ASE scale has a coefficient alpha of .81 (Chemers et al., 2001). A higher score indicates a high academic self-efficacy.

The Online Learning Technology Self-Efficacy instrument was chosen because the measured items align closely with tasks and situations that college students in the current study can relate to as a result of learning through a course management system. The scale directly measures the strength of students’ confidence in using Blackboard as an online learning tool in their course (Bates & Khasawneh, 2007). Additionally, Blackboard is the current course management system for the university. The OLTSE scale is a modified version of a computer self-efficacy scale developed by Compeau and Higgins (1995) and includes 10 items that measure students’ self-efficacy beliefs about using Blackboard under a variety of conditions. The 10-point scale ranges from not at all confident (1) to totally confident (10). Sample items include: “I can do my best in this course using Blackboard as an online learning tool if…I had never used Blackboard or similar software package before” and “…I had only a Student User Manual for reference.” A higher score indicates that a student has a higher strength of self-efficacy or confidence in using Blackboard as an online learning tool in their course. The original computer self-efficacy scale has a high internal consistency reliability of .94 (Compeau, Higgins, & Huff, 1999).
College Student Groups

The Nontraditional Scale was selected as a measure used to cluster students into nontraditional and traditional college student groups, and the researcher developed an item to identify students according to their undergraduate classification (U.S. Department of Education, 1996). The Nontraditional Scale is a product of the National Center for Education Statistics who authorizes the public use of information, data, and research instruments such as the scale (see Appendix B). Because this scale has been used and mentioned in national research studies to distinguish between nontraditional and traditional students and provide a clear distinction between the two groups based on the identification of factors that are associated with being a nontraditional student (i.e., delayed enrollment, financially independent, enrolled part-time, employed full-time, has dependents other than a spouse, is a single parent, or did not receive a standard diploma), this instrument was also chosen for the current study.

The nine-item, self-report measure is a modified version of the National Postsecondary Student Aid and Beginning Postsecondary Students studies that were combined to measure nontraditional student characteristics (U.S. Department of Education, 1996). Revisions were made to the measure to reflect changes in the sample such as the school year and semester that students are reporting on. Scoring is based on the sum total of traditional or nontraditional characteristics, ranging from 0 to 7. According to the measure, traditional students will report no nontraditional characteristics and nontraditional students are either minimally nontraditional (i.e., 1 characteristic), moderately nontraditional (i.e., between 2 to 3 characteristics), or highly nontraditional (i.e., 4 or more characteristics). Sample items include: “Have you enrolled full time for
the full academic year?”; “Are you working 35 or more hours per week this month?”; and “Are you married or separated?”.

Undergraduate classification. Because the current study sought to determine whether the interaction between college student group and attitudes toward the psychosocial learning environment or self-efficacy are modified by students’ level of higher education experience, an additional item was developed to identify nontraditional or traditional freshmen, sophomores, juniors, and seniors. The item states “What is your classification?”.

Demographic Questionnaire

In a separate section, the researcher developed seven items to collect standard demographic information and other data related to college students such as age, gender, race/ethnicity, educational attainment, and online course experience.

Procedures for Conducting the Study

After research approval was granted by the Institutional Review Board (IRB), the researcher obtained a listing of online courses from the university’s Office of the Registrar Webpage. The list contains information regarding the course name and format, catalog number, instructor, and the total number of students who have enrolled in the online course. Initially, the undergraduate (i.e., 100–400 level catalog numbers) course sections that were taught exclusively at the university and entirely online were targeted, and students were contacted indirectly using three methods: (1) from the online listing, Department Chairs were emailed the survey announcement to distribute to faculty teaching online courses during the semester, (2) a survey announcement was submitted to the University’s Office of Communications and mass distributed to all faculty and students, and (3) the researcher contacted faculty teaching online courses to distribute the
survey announcement to students (see Appendix C for IRB Approval Letter and Contact Letters for the Research Study).

The survey announcement was used to introduce the study and contained pertinent information such as which students were eligible to participate, deadlines to complete the online survey, and an anonymous survey link. The Informed Consent Statement was included as an introduction to the online survey and described the study’s purpose, benefits, and foreseen risks associated with participating in the study. Participants also were required to select whether they agreed or disagreed with the informed consent statement, which provided the researcher with documentation of an individual’s consent to participate in the study (see Appendix D) for the research study’s informed consent statement.

**Survey Periods**

In order to reference data during the pretest/posttest analyses and to ensure anonymity, students were asked to develop a unique identification code during the survey. The code was comprised of the last three digits of the participants’ student identification card number and the first two letters of their mothers’ maiden name (i.e., 456as). As an incentive for participating, students who completed the pre- and posttest surveys were entered into a drawing for a chance to win a small monetary incentive: one of ten $15.00 gift cards to either Starbucks or Walmart. At the completion of each survey, students were asked to provide their email address to enter into the drawing for a chance to win a gift card. The email information was used to directly contact students to participate in the posttest survey and randomly select winners at the completion of the study. Afterwards, students’ email addresses were deleted.
Qualtrics, a Web-based survey research suite, was used to design and distribute the online surveys and collect the survey responses. Each data collection period lasted approximately two weeks, and reminder emails containing the survey announcement were periodically distributed to faculty, instructors, Department Chairs, and the faculty/student mailout. On average, the survey took approximately 15-20 minutes to complete. Participants with partially completed surveys were provided two weeks to continue taking the measures before the survey was closed and partial data was recorded.

After research participants completed the survey, a personal message appeared to thank them for their time and participation in the research study; Participants who declined to agree to the informed consent statement and/or did not meet the age criteria were redirected to a Decline to Consent message (see Appendix D for Survey Messaging).

**Posttest procedures.** The posttest study measure, Actual Online Learning Environments and Student Outcomes Survey, included changes to the Online Learning Environment Survey (OLES). Specifically, the posttest survey was comprised of items that measured students’ final preferred versus actual attitudes. The remaining items are the same (see Appendix A). A follow-up contact letter via email was sent to students who participated in the pretest survey period, and the same contact method was used during the posttest (see Appendix B). All other procedures used during the posttest phase reflect those in the pretest phase.

**Post data collection procedures.** An analyses of students’ identification codes indicated that a total of 63 students completed the pretest and posttest surveys. These cases were matched in the statistical analysis software program (SPSS). The remaining
unpaired cases were used in either the pretest or posttest analysis. The data indicated that some students attempted to complete the survey a second time instead of returning to their original, saved survey. Therefore, duplicate surveys were deleted. Last, based on the email data, 10 of 63 students were randomly selected using a random numbers generator and contacted to receive gift cards for their participation in the study.

Data Analyses Procedures

In an effort to obtain data that was most suitable in assessing differences between nontraditional and traditional students’ attitudes toward the online psychosocial learning environment, self-efficacy, and affective outcomes, statistical data were used to gather the number of students enrolled in online course. The sum total of nontraditional characteristics was used to distinguish the traditional and nontraditional college student groups and the level of nontraditional student status (i.e., minimally, moderately, or highly nontraditional). The analyses associated with each of the seven research question were as follows:

1. A repeated-measures ANOVA was used to independently assess differences in psychosocial learning environment attitudes for traditional and nontraditional college student groups (as measured by the pretest preferred scores and posttest actual scores).

2. Upon determining the ANOVA results, analyses were used to determine whether there were significant interactions between college student group (traditional and nontraditional student groups) and undergraduate classification that influenced the differences between college student groups’ attitudes.
3. Upon determining the ANOVA results, analyses were used to determine whether there were significant interactions between college student group (traditional and nontraditional student groups) and experience taking online courses that influenced differences between college student groups’ attitudes.

4. A within groups ANOVA was used to determine whether there were significant differences between groups’ affective learning outcomes as measured by:
   a. Pretest and posttest self-efficacy scores.
   b. Pretest and posttest enjoyment scores.
   c. Student satisfaction at the end of the course (Posttest preferred and posttest actual OLES scores).
   d. Upon determining the ANOVA results, analyses were used to determine whether there were significant interactions between college student group (traditional and nontraditional student groups) and undergraduate classification that influenced the difference between students’ affective learning outcomes.
   e. Upon determining the ANOVA results, analyses were used to determine whether there were significant interactions between college student group (traditional and nontraditional student groups) and experience taking online courses that influenced the difference between students’ affective learning outcomes.
5. Simple linear correlational (Pearson r) analyses were used to assess the association between attitudes about the psychosocial learning environment and self-efficacy in an online course.

6. Simple linear correlational (Pearson r) analyses were used to assess the association between attitudes about the psychosocial learning environment and the enjoyment of online learning in an online course.

7. Simple linear correlational (Pearson r) analysis was used to assess the association between self-efficacy and the enjoyment of online learning.

Summary

This chapter has provided the research methods and procedures used to guide the research study including the selection of the research sample, data collection procedures, and analyses. The sample included undergraduate students taking online courses at a university in the southeastern United States during the fall 2013-2014 academic semester. Factors that were considered in this study include traditional and nontraditional student attitudes about the psychosocial characteristics in their online courses, the degree of academic and online learning self-efficacy, then enjoyment of online learning, and the student satisfaction in the course.

A number of previously developed measures were well-suited for the current research study and were selected to determine the level of academic and online learning self-efficacy, the degree that eight psychosocial characteristics are preferred and perceived as actually present in the online learning environment, the level of enjoyment of online learning and degree of satisfaction, and whether students are considered traditional or nontraditional. Thus, the research instruments, which are described in this chapter, include the Academic Self-Efficacy and Online Learning Technology Self-
Efficacy Scales, The Online Learning Environment Survey, and the Nontraditional Scale, respectively (Bates & Khasawneh, 2007; Chemers et al., 2001; Trinidad et al., 2005; U.S. Department of Education, 1996). A demographic questionnaire was developed, and the average time used to complete the survey was between 10 to 15 minutes.

Lastly, the research study procedures and planned analyses are detailed and involved multiple stages. A small monetary incentive that included a chance to win one of ten $15.00 gift cards from either Walmart or Starbucks was offered to students who completed the study. The researcher randomly selected email addresses from the pool of participants in order to determine a winner at the conclusion of the data collection period. Statistical analyses included a combination of comparative and correlational analyses during the pretest and posttest phases. The chapter to follow will provide the results of this study.
CHAPTER IV
FINDINGS

Introduction

This chapter details the findings of the research study and is divided into two sections, namely, the report of descriptive data and report of data results. The descriptive data includes information about the sample and research variables such as participant demographics, reliability information for each scale, and frequency or average responses to the survey items. The report of data results includes the analysis of the data associated with each research question.

Report of Descriptive Data

Overview of Participant Demographics

A total of 151 undergraduate students participated in the study, including 129 students who completed the pretest and 22 students who were first-time participants completing the posttest. While students were encouraged to complete the pretest and posttest surveys, the data revealed that 63 individuals returned to complete the posttest survey. Therefore, 129 students were included in the analysis of pretest data, 85 students were included in the analyses of posttest data, and the analysis of pretest and posttest differences included 63 individuals. Eighteen cases were missing pertinent grouping data (i.e., traditional/nontraditional student group status) and were excluded from portions of the analyses. Pretest and posttest data indicated that the majority of students were female, and students’ reported age varied from traditional-aged (i.e., 18-24) to nontraditional-aged (i.e., at least 25 years old). Also, the majority of students were classified as sophomores, juniors, and seniors. Table 3 includes the gender, age, and undergraduate classification of the research study participants.
Table 3

*Percentages of Sociodemographics among Research Participants*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19.3%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Female</td>
<td>80.7%</td>
<td>84.4%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>52.2%</td>
<td>52.6%</td>
</tr>
<tr>
<td>25-34</td>
<td>24.3%</td>
<td>17.9%</td>
</tr>
<tr>
<td>35 and Older</td>
<td>23.5%</td>
<td>29.5%</td>
</tr>
<tr>
<td><strong>Undergraduate Classification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>8.7%</td>
<td>9%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>26.1%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Junior</td>
<td>31.3%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Senior</td>
<td>33.9%</td>
<td>39.7%</td>
</tr>
</tbody>
</table>

Through a data recoding process, the occurrences of nontraditional student characteristic variables (enrollment status, financial and family status, and high school graduation status) within each case were counted to create a college student group variable as a way to group students as traditional or nontraditional and to determine nontraditional student status. The pretest and posttest data indicated that almost 70% of the sample consisted of nontraditional students who reported having at least one or more of the following nontraditional characteristics: delayed enrollment, part-time enrollment, financial independence, full-time employment while enrolled, have dependents, single parent, or did not receive a standard high school diploma. The sample included traditional, minimally nontraditional, moderately nontraditional, and highly nontraditional students. Table 4 includes a summary of students’ nontraditional characteristics and nontraditional student status.
Table 4

*Percentages of Nontraditional Student Characteristics and Nontraditional Student Status by Research Participants*

<table>
<thead>
<tr>
<th>Nontraditional Characteristics</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delayed enrollment</td>
<td>27.1%</td>
<td>30.4%</td>
</tr>
<tr>
<td>Part-time enrollment</td>
<td>14%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Financial independence</td>
<td>56.6%</td>
<td>64.1%</td>
</tr>
<tr>
<td>Full-time employment while enrolled</td>
<td>34.1%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Has Dependents</td>
<td>26.4%</td>
<td>37.2%</td>
</tr>
<tr>
<td>Single parent</td>
<td>14%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Did not receive standard high school diploma</td>
<td>7%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nontraditional Student Status</th>
<th>N</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional students</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td>Nontraditional Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimally</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Moderately</td>
<td>36</td>
<td>19</td>
</tr>
<tr>
<td>Highly</td>
<td>28</td>
<td>23</td>
</tr>
</tbody>
</table>

The pretest data revealed that approximately 78% of students had taken at least one online course prior to this semester, and 40% reported having taken five or more courses. Also, the posttest showed that 47.4% of the sample had taken five or more courses. A broad range of disciplines were also represented based on student reports of the subject of the online class and type of program that he or she was currently enrolled in. A higher percentage of students reported taking English, Family Studies, and Music related classes compared to other courses. Additionally, more online students were majoring in Nursing, Business Administration, Construction, Construction Engineering
Technology, Criminal Justice, Family Studies, Interdisciplinary Studies, and Psychology programs.

Results from the Online Learning Environment Survey

Although there is some degree of overlap, a factor analysis conducted by Trinidad, Aldridge, and Fraser (2005) indicated that the eight subscales of the Online Learning Environment Survey used to measure the psychosocial learning environment were independent of one another and scored separately. The current study assessed the reliability of each subscale and students’ attitudes toward individual scale items. The average score on each scale was used to measure students’ overall attitudes. The pretest results measured student responses at the beginning of the semester (i.e., within the first two weeks of class), and the posttest survey measured student responses within two weeks prior to the university’s scheduled final examinations. Whereas the pretest survey recorded one response per item, the latter prompted students to provide two responses per each item: a preferred and actual attitude score.

The computer use subscale consisted of six items ($\alpha=.76$); the teacher support subscale consisted of 8 items ($\alpha=.91$); and the student interaction and collaboration subscale consisted of 6 items ($\alpha=.88$). The subscales that measured personal relevance, authentic learning, and student autonomy consisted of 5 items ($\alpha=.88$; $\alpha=.89$; $\alpha=.71$). Lastly, the Cronbach’s alphas for the 7 equity and 6 asynchronicity items were .93 and .82, respectively. Therefore, each subscale of the Online Learning Environment Survey was found to be reliable. Table 5 shows students’ overall scores on each scale and the difference between students’ pretest preferred and posttest actual scores.
Table 5

*Means (s.d.) for Psychosocial Learning Environment Subscales*

<table>
<thead>
<tr>
<th>OLES scale</th>
<th>Pretest*</th>
<th>Posttest**</th>
<th>Diff***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Computer Use</td>
<td>4.23</td>
<td>.67</td>
<td>4.25</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>4.16</td>
<td>.71</td>
<td>4.52</td>
</tr>
<tr>
<td>Student Interaction and Collaboration</td>
<td>3.46</td>
<td>.95</td>
<td>3.48</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>3.94</td>
<td>.81</td>
<td>4.27</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>3.98</td>
<td>.75</td>
<td>4.31</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>4.49</td>
<td>.48</td>
<td>4.74</td>
</tr>
<tr>
<td>Equity</td>
<td>4.43</td>
<td>.66</td>
<td>4.69</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>4.17</td>
<td>.73</td>
<td>4.41</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>3.40</td>
<td>1.10</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. *N* = 118 students; **N** = 76 students; ***Diff* = the mean difference between posttest actual scores and pretest scores.

*Computer use.* The pretest results indicated that nearly half (45%) of the sample almost always preferred to use the computer to email assignments, ask the teacher questions (45%), and take part in online discussions with other students (48%). More than half of students almost always used the computer to find out information about their course (69%), read lesson notes (62%), and find out information about how his or her work will be assessed (59%). As a whole, computer use was high.

There were no statistically significant differences between students’ pretest preferred and posttest actual computer use scores, $F (1) = 1.251, p = .268$. The posttest
revealed that half (51.9%) of the sample reported that they almost always preferred to use the computer to email assignments and that half (50.6%) reported almost always using the computer to do so. Also, 71.4% of students almost always preferred to use the computer to find out information about their course, while 71.8% actually used the computer to accomplish this task. On some scale items, students reported different preferred and actual attitudes. For example, a lower percentage of students (45.5%) preferred to use the computer to take part in online discussions with other students compared to the reported actual usage (50%). Lastly, the difference between students’ posttest preferred and actual computer use scores (N=75, M = -.089, SD = .46) was not statistically significant, F (1) = 2.846, p= .096.

*Teacher support.* Pretest scores indicated that more than half of the sample almost always preferred a psychosocial learning environment where the teacher encourages participation (57%) and was easy to contact (60%). Nearly half of online students reported that the teacher almost always responded promptly to questions (43%), adequately addressed questions (43%), and provided useful feedback on work (40%). Fewer students reported that the teacher almost always helped to identify problem areas (30%) and provided valuable feedback on assignments (37%). The average pretest teacher support score was high.

The difference between students’ pretest preferred and posttest actual teacher support scores was statistically significant, F (1) = 10.912, p= .002, and students reported that the actual teacher support was lower than the preferred. The pretest and posttest mean scores differed on items such as “the teacher helps identify problem areas in my study” (N=120, M=3.77, SD=1.11; N=77, M=3.26, SD=1.46); “the teacher responds
promptly to my questions” (N=120, M=4.18, SD=.840; N=77, M=3.86, SD=1.20); and
“the teacher provides me with useful feedback on my work” (N=118, M=4.03, SD=.995; N=77, M=3.52, SD=1.47).

The posttest scores revealed that the majority of students preferred a high level of teacher support in the online classroom. The difference between students’ posttest preferred and actual teacher support scores (N=73, Μ = -.79, SD = 1.02) was statistically significant, F (1) = 43.805, p < .001, and the preferred scores were lower than the actual scores. Further, the posttest revealed that 82.9% of students almost always preferred that the teacher find the time to respond if he or she had a question, and 55.8% reported that the teacher almost always actually found the time to respond. More students (73.7%) also preferred that the teacher almost always responded promptly to his or her questions, and fewer (41.6%) reported that a prompted response to questions almost always occurs. Notably, nearly 43% of students reported that their questions were responded to sometimes (20.8%) or often (22.1%).

Student interaction and collaboration. More than half (53%) of the sample reported having the ability to almost always work with others in the online learning environment. However, there was a lower percentage of students who were frequently involved in group work (20%), collaborated with other students in the class (22%), discussed ideas with other students (17.1%), shared information with others (13%), and related their work to other’s work (31%).

The difference between students’ pretest preferred and posttest actual scores was not statistically significant, F (1) = 2.624, p=.111. However, the difference between students’ posttest preferred and actual scores (N=73, Μ = -.40, SD = 1.10) was
statistically significant, $F (1) = 9.604, p= .003$. While 42% of respondents preferred that he or she can almost always work with others, 36.4% reported actually doing so. More students (31.6%) preferred almost always being involved in group work as part of class activities than the number (28.6%) who reported that this type of activity actually occurred. Also, the majority of students (34.2%) preferred to almost always collaborate with other students in the class compared to the majority of students (26%) who reported actually collaborating with others.

*Personal relevance.* Individual scale items indicated that there were mixed attitudes about the degree of personal relevance in the psychosocial learning environment as the responses were more widespread. For instance, 36% of students reported being able to almost always relate what was learned to their life outside of class. Less than half of the sample also reported the ability to almost always pursue topics of interest (41%), apply everyday experiences in the class (32%), link class work to life outside of the class (29%), and learn things about the world outside of class (44%). Pretest scores indicated a relatively high degree of personal relevance.

The difference between students’ pretest preferred and posttest actual scores was not statistically significant, $F (1) = 2.306, p=.134$. The posttest scores showed that the majority (54.7%) of students almost always preferred to relate what he or she learned to his or her life outside of class, while 33.8% reported almost always actually being able to do so. Almost always, more students (65.3%) preferred to be able to pursue topics that were of interest to them compared to 37.7% who reported actually doing so. Overall, students’ posttest preferred scores were higher than their actual personal relevance scores,
and the difference was (N=73, $M = -0.611$, $SD = 0.95$) was statistically significant, $F (1) = 30.206$, $p < .001$.

**Authentic learning.** A higher percentage of the sample reported that they often studied real cases related to the class activities (29%), used real facts in class activities (41%), worked on assignments that deal with real-world information (44%), worked with real examples (46%), and applied real world experience to the topic of study (39%), compared to other responses. The pretest scores indicated a relatively high preference for authentic learning.

The difference between students’ pretest preferred and posttest actual authentic learning scores was not statistically significant, $F (1) = 2.306$, $p = .134$. However, the posttest results indicated higher preferred than actual authentic learning scores, and the difference between students’ posttest preferred and actual scores (N=74, $M = -0.55$, $SD = 0.86$) was statistically significant, $F (1) = 30.335$, $p < .001$. More than half of the sample (61.8%) preferred to almost always use real facts in class activities, but 42.9% reported the actual use of real facts in their activities. Similarly, 63.2% of respondents preferred to almost always work on assignments that dealt with real-world information, and 42.9% reported actually working on assignments that dealt with real-world information. Also, a high percentage (57.3%) of students almost always preferred to apply real world experience to the topic of study, but a lower percentage reporting doing so (37.7%).

**Student autonomy.** More than half of the sample (55%) almost always makes decisions about his or her learning, works during convenient times (59%), is in control of his or her own learning (56%), plays an important role in his or her learning (77%), and approaches learning in his or her own way (56%). Student autonomy was the highest
rated component of the psychosocial learning environment when compared to other subscales.

Students’ pretest, preferred student autonomy scores were higher than the posttest, actual student autonomy scores, and the difference between the scores was statistically significant, $F(1) = 4.724, p = .034$. Also, the posttest results indicated that students reported higher preferred than actual attitudes, and the difference between students’ posttest preferred and actual scores ($N=73, M = -.46, SD = .71$) was statistically significant, $F(1) = 30.774, p < .001$. Posttest results indicated that while 73.3% of the sample almost always preferred to make decisions about his or her learning, less than half (48%) actually made these decisions. Approximately 81.3% of students almost always preferred to work during times that were convenient, and more than half (65%) agreed that this almost always occurred in their learning environments. More than 80% of students also preferred to almost always play an important role in their learning, and 71.1% reported being able to play an important role in their learning.

*Equity.* The sample reported high attitudes towards the degree of equity in an online psychosocial learning environment. Specifically, more than half (53%) of the sample report that the teacher almost always gives as much attention to his or her questions compared to other students’ questions. Also, more students believed that they are almost always treated the same as other students (61%), receive the same amount of help from the teacher (55%), receive the same level of encouragement (59%), get the same opportunity to contribute to class discussions (71%), had the same opportunity to answer questions as others (67%), and that his or her work receives as much praise as other students’ work (52%).
The difference between students’ pretest preferred and posttest equity scores was not statistically significant, $F (1) = .154, p = .697$. A similar percentage of students reported that the teacher almost always gave as much attention to their questions as to other students’ questions (54.5%), believed that they are treated the same as other students in the class (67.5), received the same amount of help (58.4%) and the same level of encouragement (66.2%), have the same opportunity to contribute to class discussion (76.3%) and answer questions (71.4%), and their work received as much praise as other students’ work (63.2%). In contrast, students reported higher posttest preferred than actual scores, and the difference between the scores ($N=74, M = -.25, SD = .65$) was statistically significant, $F (1) = 10.928, p = .001$.

Asynchronicity. More learners reported a high level of asynchronicity. Compared to other responses, a higher percentage of students reported almost always accessing the discussion forum at convenient places (46%), reading posted messages at convenient times (50%), taking time to think about messages before posting (67%), and finding it useful to have a written record of messages to refer back to (58%). Less than half (39%) of the sample reported that almost always posting messages improved his or writing skills and the process of writing and posting messages helped him or her to think (43%). As a whole, the pretest asynchronicity scores were high.

The difference between students’ pretest preferred and posttest actual asynchronicity scores was not statistically significant, $F (1) = .070, p = .793$. However, students’ posttest preferred scores were higher than their actual scores, and the difference between the posttest scores ($N=74, M = -.17, SD = .61$) was statistically significant, $F (1) = 5.96, p = .017$. 
Enjoyment of Online Learning, Academic Self-Efficacy, and Online Learning Technology
Self-Efficacy Scales.

The reliability of each scale used to measure affective learning variables and
student attitudes toward individual scale items were assessed. The enjoyment scale was
found to be highly reliable (6 items; α=.93). Additionally, Cronbach’s alphas for the 10
online learning and 8 academic self-efficacy items were .84 and .88, respectively. Scale
items were administered once during the pretest and posttest. Relative to online learning
self-efficacy, students were asked to rate their level of confidence to perform well in a
course using Blackboard as the online tool under certain conditions. Responses ranged
from 1 (not at all confident) to 10 (totally confident), and the possible total scale score
ranges from 10 (low confidence) to 100 (total confidence). The Academic Self-Efficacy
scale measured students reported level of confidence to perform course/school-related
activities. Responses ranged from 1 (not true) to 7 (very true), and the possible total scale
score ranges from 1 (low self-efficacy) to 7 (high self-efficacy).

The data was also used to analyze pretest and posttest score differences. Table 6
indicates the mean scores on each scale.

Table 6

<table>
<thead>
<tr>
<th>Scale</th>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest*</td>
<td>Posttest**</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Online Learning Enjoyment</td>
<td>3.40</td>
<td>1.10</td>
</tr>
<tr>
<td>Academic Self-Efficacy</td>
<td>6.08</td>
<td>.85</td>
</tr>
</tbody>
</table>
Table 6 (continued).

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest* M</th>
<th>SD</th>
<th>Posttest** M</th>
<th>SD</th>
<th>Diff*** M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Learning Technology Self-Efficacy</td>
<td>68.74</td>
<td>19.96</td>
<td>69.92</td>
<td>20.73</td>
<td>1.03</td>
<td>22.18</td>
</tr>
</tbody>
</table>

Note. *N=118 students; **N=76 students. *** (N=61; N=61; N=60) Diff= the mean difference between preferred and actual scores.

Enjoyment of online learning. The pretest scores indicated a moderate degree of enjoyment of online learning ($M = 3.39, SD = 1.098$). Compared to other responses, more students reported that he or she sometimes preferred online learning (36%), was excited about online learning (35%), enjoyed studying online (32%), and would enjoy his or her education if more classes were offered online (27%). Also, more students reported that online learning was almost always worth their time. Less than half (37%) of the sample was almost always satisfied with their current online class.

Students reported higher enjoyment scores by the end of the semester, and the difference between students’ preferred and actual enjoyment scores ($N=73, M = -.611, SD = .95$) was statistically significant, $F (1) = 30.206, p < .001$.

Academic self-efficacy. Seventy-five percent of the sample was highly confident that he or she was capable of succeeding at this college. More than half of students were highly confident that he or she usually did very well in school and at academic tasks (55%), was a very good student (53%), knew how to take notes (54%), and know how to schedule time to accomplish tasks (51%). Compared to other tasks, fewer students (29%) reported being totally confident in conducting research and writing papers. On average,
the pretest scores indicated a high degree of academic self-efficacy ($M = 6.08$, $SD = .852$).

The difference between students’ pretest preferred and posttest actual academic self-efficacy scores was not statistically significant, $F (1) = 2.220$, $p= 141$. Similar to the pretest, the posttest data indicated that the majority of students (73.1%) were highly confident that they were very capable of succeeding at this college, usually performed very well in school and at academic tasks (50.6%) and knew how to take notes (55.1%) and scheduled their time to accomplish tasks (51.3%).

*Online learning technology self-efficacy.* Nearly half (44%) of the sample was totally confident in performing well in a course using Blackboard if he or she had used similar online learning packages in other courses before using Blackboard and if he or she could call someone for help when stuck using the online tool (42%). More students were also totally confident if the instructor or someone else helped them to get started (38%) or if the instructor or someone else showed him or her how to use Blackboard first (36%). Compared to other responses, a higher percentage of the sample were totally confident in their ability to perform well in the course using Blackboard for all instances. However, fewer students reported a total confidence to perform well in their course if he or she only used the built-in online help desk for assistance (29%), had more time to complete course-related work (29%), there was no one around (25%), or used a student user manual for reference (20%). Students’ online learning technology self-efficacy was above average.

The difference between students’ pretest preferred and posttest actual online learning technology self-efficacy scores was not statistically significant, $F (1) = .130$, $p=$
The posttest indicated that 45.9% of the students were totally confident to perform well in their course if he or she had used similar online learning packages in other courses before using Blackboard. A similar percentage (37.7%) of students felt totally confident if they could call someone for help or if the instructor or someone else helped them to get started (34.7%) or showed them how to use Blackboard first (33.3%). As with the pretest, the posttest revealed lower percentages of total confidence to perform well in the course when just using the built-in online help desk for assistance (25.4%), if there was no one around to tell the student what to do (24.7%), or only having a student user manual to reference (21.1%).

Report of Data Results

The report of data results details the data analysis procedures and findings that are associated with each research question including: 1) Are there significant differences in attitudes toward eight psychosocial online learning environment dimensions across a semester for individuals in different college student groups?; 2) Does undergraduate classification have an influence on traditional and nontraditional students’ attitudes about the psychosocial learning environment in an online course?; 3) Does experience taking online courses have an influence on traditional and nontraditional students’ attitudes about the psychosocial learning environment in an online course?; 4) Does being a traditional or nontraditional student influence students’ affective learning outcomes? If so, in what ways?; 5) What is the relationship between attitudes about the psychosocial learning environment in an online course and self-efficacy?; 6) What is the relationship between attitudes about the psychosocial learning environment in an online course and the enjoyment of online learning?; and 7) What is the relationship between self-efficacy
and the enjoyment of online learning? An analysis of the between group differences among traditional students and minimally, moderately, and highly nontraditional students was initially conducted, but the differences were minimized as a result of comparing four groups. The following analyses compared traditional and nontraditional student groups as a whole.

**College Student Groups and the Psychosocial Learning Environment**

After determining students’ overall attitudes, the primary research objective was to examine group attitudes to determine whether being traditional or nontraditional influenced students’ psychosocial learning environment attitudes. The following analyses included those students who participated in both the pretest and posttest periods. The results of the repeated-measures ANOVA indicated that the difference between traditional and nontraditional students’ pretest and posttest actual computer usage, teacher support, personal relevance, authentic learning, student autonomy, and equity scores were not statistically significant. Table 7 includes traditional and nontraditional students’ pretest and posttest (actual) mean scores.

**Table 7**

*Means (s.d.) for Group Pretest Preferred and Posttest Actual Scores on the OLES*

<table>
<thead>
<tr>
<th>OLES scale</th>
<th>Traditional</th>
<th>Nontraditional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preferred*</td>
<td>Actual**</td>
</tr>
<tr>
<td>Computer Use</td>
<td>4.07 .70</td>
<td>4.03 .83</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>4.20 .67</td>
<td>3.57 1.29</td>
</tr>
</tbody>
</table>
Table 7 (continued).

<table>
<thead>
<tr>
<th>OLES scale</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Between Groups Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Student Interaction and Collaboration</td>
<td>3.78</td>
<td>.94</td>
<td>3.25</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>3.81</td>
<td>.82</td>
<td>3.58</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>3.87</td>
<td>.76</td>
<td>3.73</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>4.52</td>
<td>.47</td>
<td>4.28</td>
</tr>
<tr>
<td>Equity</td>
<td>4.38</td>
<td>.68</td>
<td>4.35</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>3.98</td>
<td>.83</td>
<td>3.77</td>
</tr>
</tbody>
</table>

Note. *Pretest; N=116 students (37 traditional; 79 nontraditional). **Posttest; N=76 students (24 traditional; 52 nontraditional).

The results revealed that the difference between traditional and nontraditional students’ pretest and posttest actual student interaction and collaboration scores and asynchronicity scores were statistically significant. Table 8 shows the within group analyses, comparing students’ pretest and posttest scores, and the significance level between the student groups’ scores on each of the psychosocial learning environment subscales.

Table 8

**Within Groups ANOVA of Pretest Preferred and Posttest Actual OLES Scores and Significance Level between Traditional and Nontraditional Student Groups**

<table>
<thead>
<tr>
<th>OLES scale</th>
<th>Between Groups Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td>Computer Use</td>
<td>2.862</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>.129</td>
</tr>
<tr>
<td>Student Interaction and Collaboration</td>
<td>4.049</td>
</tr>
</tbody>
</table>
The roles of undergraduate classification and online course experience. After determining the statistical significance level of the between group differences for each scale, the second and third objectives involved conducting analyses to determine whether college student group alone or the interaction between college student group and other independent factors (i.e., undergraduate classification and experience taking online courses) influenced student attitudes on the psychosocial learning environment subscales (i.e., those that were statistically significant). Analyses were conducted to assess the interaction of the abovementioned factors and their influence on students’ student interaction and collaboration and asynchronicity scores.

Student interaction and collaboration. The data revealed that students were classified as freshmen (N=5), sophomores (N=14), juniors (N=15), or seniors (N=25). Experience was categorized by the number of courses that students were enrolled in prior to the current semester and included no previous experience (0 classes; N=13), one to two classes (N=10), three to four classes (N=12), and five or more classes (N=24). The results showed that there was no significant interaction between college student group and undergraduate classification, $F(3, 3) = .742$, $p=.532$. Also, the results revealed that there

<table>
<thead>
<tr>
<th>Table 8 (continued).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Relevance</td>
</tr>
<tr>
<td>Authentic Learning</td>
</tr>
<tr>
<td>Student Autonomy</td>
</tr>
<tr>
<td>Equity</td>
</tr>
<tr>
<td>Asynchronicity</td>
</tr>
</tbody>
</table>

was no significant interaction between college student group and experience taking online courses, F (3, 3) = 1.460, p = .236.

Asynchronicity. Similar to the previously mentioned data, the analysis included freshmen (N=5), sophomores (N=14), juniors (N=16), and seniors (N=25). There were no significant differences between groups, F (3, 3) = .546, p = .653 (i.e., traditional freshman versus nontraditional freshman). Online course experience included no previous experience (0 classes; N=13), one to two classes (N=10), three to four classes (N=12), and five or more classes (N=25). The interaction between college student group and experience taking online courses did not have an influence on students’ asynchronicity scores, F (3, 3) = 1.710, p = .176.

College Student Groups and Affective Learning Outcomes

The fourth research objective was to determine whether there were significant mean differences between traditional and nontraditional students’ affective learning outcomes, which included the stability or changes in student self-efficacy and enjoyment scores and student satisfaction of the psychosocial learning environment at the end of the course. Simple correlation analyses revealed that not all the variables were related; thus, each affective learning variable was independently analyzed using within groups ANOVA. Table 9 presents the affective learning mean scores for both groups.
Table 9

Means (s.d.) for Group Preferred and Actual Affective Learning Variables and Student Satisfaction Scores

<table>
<thead>
<tr>
<th>Scales</th>
<th>Traditional</th>
<th></th>
<th>Nontraditional</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preferred*</td>
<td>Actual**</td>
<td>Preferred*</td>
<td>Actual**</td>
</tr>
<tr>
<td></td>
<td>M  SD</td>
<td>M  SD</td>
<td>M  SD</td>
<td>M  SD</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>3.01 1.09</td>
<td>2.88 1.20</td>
<td>3.57 1.05</td>
<td>3.71 .98</td>
</tr>
<tr>
<td>Academic Self-Efficacy</td>
<td>6.15 .83</td>
<td>5.83 1.44</td>
<td>6.04 .88</td>
<td>5.97 .91</td>
</tr>
<tr>
<td>Online Learning Technology Self-Efficacy</td>
<td>69.61 18.47</td>
<td>67.30 21.31</td>
<td>68.92 20.24</td>
<td>71.04 20.57</td>
</tr>
<tr>
<td>Student Satisfaction***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Use</td>
<td>4.13 .85</td>
<td>4.03 .83</td>
<td>4.29 .69</td>
<td>4.24 .74</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>4.35 .97</td>
<td>3.57 1.29</td>
<td>4.60 .57</td>
<td>3.87 .99</td>
</tr>
<tr>
<td>Student Interaction and Collaboration</td>
<td>3.75 1.23</td>
<td>3.25 1.42</td>
<td>3.41 1.17</td>
<td>3.07 1.27</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>4.01 1.23</td>
<td>3.58 1.32</td>
<td>4.38 .71</td>
<td>3.73 .97</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>4.25 .75</td>
<td>3.73 .98</td>
<td>4.35 .77</td>
<td>3.79 1.03</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>4.65 .66</td>
<td>4.28 .93</td>
<td>4.77 .40</td>
<td>4.33 .76</td>
</tr>
<tr>
<td>Equity</td>
<td>4.53 .76</td>
<td>4.35 .89</td>
<td>4.76 .47</td>
<td>4.48 .73</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>4.14 1.06</td>
<td>3.77 1.13</td>
<td>4.52 .64</td>
<td>4.43 .66</td>
</tr>
</tbody>
</table>

Note. *N=115 students (36 traditional; 79 nontraditional). **N=78 students (24 traditional; 54 nontraditional). ***Student satisfaction at the end of the course includes posttest preferred (N= 21-22 traditional; 53 nontraditional) and posttest actual (N= 24 traditional; 52-53 nontraditional) scores.

**Enjoyment of online learning.** The difference in the preferred and actual enjoyment scores for traditional (N= 21, M= -.10, SD=1.05) and nontraditional students (N= 40, M=.20, SD=.86) was statistically significant, F (1, 1) = 4.772, p=.033. Further analyses assessed the role of undergraduate classification and experience taking online
courses. The sample included freshmen (N=5), sophomores (N= 14), juniors (N=17), and seniors (N=25). The sample also included students with no experience (N=14), one to two classes (N=10), three to four classes (N=12), and five or more classes (N=25).

The roles of undergraduate classification and online course experience. Analyses revealed that the interaction between the college student group and undergraduate classification was not statistically significant F (3, 3) = .331, p= .803. Also, the interaction between the college student group and experience taking online courses did not have a significant impact on enjoyment, F (3, 3) = 1.630, p= .193.

Self-Efficacy. The difference in the preferred and actual academic self-efficacy scores for traditional (N= 21, M= -.36, SD=1.20) and nontraditional students (N=40, M= -.06, SD=.59) was not statistically significant F (1, 1) = .183, p= .670. Also, the difference in the preferred and actual online learning self-efficacy scores for traditional (N= 20, M= -3.05, SD=21.75) and nontraditional students (N=40, M= 3.08 SD=.22.38) was not statistically significant F (1, 1) = .002, p= .964.

Student satisfaction of the online learning environment. The within groups ANOVA results showed that there were statistically significant differences between traditional and nontraditional students satisfaction asynchronicity scores as shown in Table 10.
Table 10

Means (s.d.) for Group Student Satisfaction Scores and Between Group Differences (ANOVA results) on the OLES

<table>
<thead>
<tr>
<th>Student Satisfaction</th>
<th>Traditional* Preferred-Actual</th>
<th>Nontraditional** Preferred-Actual</th>
<th>Between Groups Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M    SD</td>
<td>M    SD</td>
<td>F    p</td>
</tr>
<tr>
<td>Computer Use</td>
<td>.12  .43</td>
<td>-.05 .39</td>
<td>.931 .338</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>-.89 1.12</td>
<td>-.76 .98</td>
<td>3.029 .086</td>
</tr>
<tr>
<td>Student Interaction</td>
<td>.12  .43</td>
<td>-.36 .98</td>
<td>1.228 .272</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>-.39  .88</td>
<td>-.73 .96</td>
<td>1.495 .226</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>-.46  .71</td>
<td>-.61 .92</td>
<td>.084 .773</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>-.44  .67</td>
<td>-.47 .73</td>
<td>.819 .368</td>
</tr>
<tr>
<td>Equity</td>
<td>-.19  .67</td>
<td>-.27 .65</td>
<td>1.597 .210</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>-.35  .77</td>
<td>-.10 .52</td>
<td>7.437 .008***</td>
</tr>
</tbody>
</table>

Note. *N= 21-22 traditional students. **N= 51-52 nontraditional students. ***p ≤.05.

The roles of undergraduate classification and online course experience. Analyses were conducted to assess the interaction between college student group and undergraduate classification as well as experience taking online courses to determine their influence on differences in student group asynchronicity scores. The posttest group sample included freshmen (N=6), sophomores (N= 18), juniors (N=20), and seniors (N=30). The sample also included students with no experience (N=14), one to two classes (N=12), three to four classes (N=11), and five or more classes (N=37). The results indicated that students’ undergraduate classification alone did not influence students’ asynchronicity scores, F (3, 3) = 2.643, p= .056, and also that there was no significant
interaction between classification and college student group, F (3, 3) = 1.121, p= .347. Experience alone and the interaction between experience and the college student group did not have a significant influence on the difference between students’ asynchronicity scores (F (3, 3) = 1.579, p= .203; F (3, 3) = 1.978, p= .126).

*The Psychosocial Learning Environment Attitudes and Self-Efficacy*

The fifth objective of the study was to determine the relationships between the individual psychosocial learning environment attitudes and self-efficacy. Pearson r (two-tailed) indicated that the pretest and posttest scores revealed different associations among variables as shown in Table 11.

Table 11

*Academic Self-Efficacy-Environment Associations*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest Academic Efficacy-Environment Association</th>
<th>Posttest Academic Efficacy-Environment Association (actual)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Significance (2-tailed)</td>
</tr>
<tr>
<td>Computer Use</td>
<td>.117</td>
<td>.210</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>.215*</td>
<td>.020</td>
</tr>
<tr>
<td>Student Interaction and Collaboration</td>
<td>.250**</td>
<td>.007</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>.179</td>
<td>.053</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>.256**</td>
<td>.005</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>.334**</td>
<td>.000</td>
</tr>
<tr>
<td>Equity</td>
<td>.289**</td>
<td>.002</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>.293**</td>
<td>.001</td>
</tr>
</tbody>
</table>

Note. N=117 students (pretest); N=76-77 students (posttest). *Correlation is significant at the 0.05 level. **Correlation is significant at the 0.01 level.
The pretest data indicated that the correlation between academic self-efficacy and preferred teacher support scores was found to be statistically significant. Additionally, there were statistically significant correlations between academic self-efficacy and students’ preferred student interaction and collaboration; academic self-efficacy and preferred authentic learning; academic self-efficacy and preferred student autonomy; academic self-efficacy and preferred equity; and academic self-efficacy and preferred asynchronicity scores. The posttest data concluded that the correlation between academic efficacy and students’ actual computer use, teacher support, personal relevance, authentic learning, student autonomy, and equity scores were found to be statistically significant.

The pretest data indicated that there were no significant correlations between online learning self-efficacy and attitudes about the psychosocial learning environment. However, the posttest data indicated that the correlation between online learning self-efficacy and student autonomy scores was found to be statistically significant as shown in Table 12.

Table 12

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest Online Efficacy-Environment Association</th>
<th>Posttest Online Efficacy-Environment Association (actual)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Significance (2-tailed)</td>
</tr>
<tr>
<td>Computer Use</td>
<td>.065</td>
<td>.485</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>.109</td>
<td>.240</td>
</tr>
<tr>
<td>Student Interaction and</td>
<td>.009</td>
<td>.921</td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>-.072</td>
<td>.441</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>-.036</td>
<td>.701</td>
</tr>
</tbody>
</table>
Table 12 (continued).

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest Online Efficacy-Environment Association</th>
<th>Posttest Online Efficacy-Environment Association</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Significance (2-tailed)</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>.012</td>
<td>.902</td>
</tr>
<tr>
<td>Equity</td>
<td>.102</td>
<td>.272</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>.117</td>
<td>.209</td>
</tr>
</tbody>
</table>

Note. N=117 students (pretest); N= 75-77 students (posttest); *Correlation is significant at the 0.05 level.

The Psychosocial Learning Environment Attitudes and Online Learning Enjoyment

The sixth research objective was to determine the relationships between the psychosocial learning environment attitudes and the enjoyment of online learning, using the pretest and posttest data. Pearson r (two-tailed) determined that the correlations between enjoyment of online learning and students’ preferred computer use, authentic learning, and asynchronicity were statistically significant. The posttest scores revealed that the correlation between enjoyment of online learning and students’ actual teacher support, personal relevance, and asynchronicity scores were also statistically significant. Table 13 shows the correlation between enjoyment and environment scores.

Table 13

Enjoyment-Environment Associations

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest Enjoyment-Environment Association</th>
<th>Posttest Enjoyment-Environment Association (actual)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Significance (2-tailed)</td>
</tr>
<tr>
<td>Computer Use</td>
<td>.330**</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Teacher Support</td>
<td>.179</td>
<td>.053</td>
</tr>
</tbody>
</table>
Table 13 (continued).

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest Enjoyment-Environment Association</th>
<th>Posttest Enjoyment-Environment Association</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Significance (2-tailed)</td>
</tr>
<tr>
<td>Student Interaction and Collaboration</td>
<td>.080</td>
<td>.393</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>.179</td>
<td>.053</td>
</tr>
<tr>
<td>Authentic Learning</td>
<td>.191*</td>
<td>.039</td>
</tr>
<tr>
<td>Student Autonomy</td>
<td>.173</td>
<td>.062</td>
</tr>
<tr>
<td>Equity</td>
<td>.102</td>
<td>.272</td>
</tr>
<tr>
<td>Asynchronicity</td>
<td>.491**</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. N=117 students (pretest); N= 74-78 students (posttest). * Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level.

**Self-Efficacy and Online Learning Enjoyment**

The final research objective was to determine associations between students’ self-efficacy and the enjoyment of online learning. Pearson r analyses of the pretest data indicated that the correlation between academic self-efficacy and enjoyment of online learning scores was not found to be statistically significant, $r(116)= +.167, p=.072$, two-tailed. The correlation between online learning self-efficacy and enjoyment of online learning scores was found to be statistically significant, $r(116)= +.231, p=.012$, two tailed. An analyses of the posttest data revealed that the correlation between academic self-efficacy and enjoyment of online learning scores was statistically significant, $r(77)= +.303, p=.007$, two tailed. The correlation between the posttest online learning self-efficacy and enjoyment of online learning scores was not statistically significant, $r(76)= +.216, p=.059$, two tailed.
Summary

The current chapter provided the analyses and report of the data results. The sample size totaled 151 undergraduate students, 129 students who completed the pretest survey, and 85 students who completed the posttest survey. The descriptive analyses revealed that the majority of students were female, both traditional and nontraditional-aged, and 70% of the sample had one or more nontraditional characteristics and were considered nontraditional.

Cronbach’s alpha was used to assess the reliability of each scale and concluded that all scales were highly reliable. Specifically, the results of the current study indicated that the reliability of the learning environment scales ranged from .71 to .93. The reliability of the Academic Self-efficacy scale was .88, and the Online Learning Technology Self-Efficacy instrument reliability was .84. The preliminary data indicated that students’ pretest scores (i.e., including learning environment, enjoyment, and self-efficacy scores) were relatively high. A comparative analysis of the pretest preferred and posttest actual mean scores concluded that attitudes about computer use, student interaction and collaboration, personal relevance, authentic learning, equity, asynchronicity, academic self-efficacy, and online learning self-efficacy did not change significantly over time. However, there were significant differences between students’ pretest and posttest teacher support, student autonomy, and enjoyment scores. Particularly, the data indicated positive changes in students’ enjoyment of online learning and negative changes in students’ attitudes towards teacher support and student autonomy.
The data was primarily used to analyze whether there were differences between college student group attitudes about the psychosocial learning environment, self-efficacy, enjoyment of online learning, and student satisfaction at the end of the course. The repeated-measures ANOVA results revealed that there was no difference between students’ attitudes about computer use, teacher support, personal relevance, authentic learning, student autonomy, equity, asynchronicity, academic self-efficacy, or online learning self-efficacy. However, traditional and nontraditional students had different attitudes about student interaction and collaboration and asynchronicity in their online courses. Nontraditional students preferred to have less student interaction and collaboration and more asynchronicity than traditional students. College student groups’ affective learning outcomes also differed, in that nontraditional students reported a higher degree of enjoyment of online learning and a higher satisfaction of asynchronicity than traditional students.

The data was also used to determine associations among environment attitudes, self-efficacy, and the enjoyment of online learning. The results indicated that the association among variables differed between the pretest and posttest data. Statistically significant correlations were found between academic self-efficacy and preferred teacher support, student interaction and collaboration, authentic learning, student autonomy, equity, and asynchronicity scores. The posttest data concluded that the correlation between academic self-efficacy and actual computer use, teacher support, personal relevance, authentic learning, student autonomy, and equity posttest scores were statistically significant. There were no statistically significant correlations between online learning self-efficacy and environment scores during the pretest, but the correlation
between online learning self-efficacy and actual student autonomy scores were statistically significant.

The associations between students’ environment scores and enjoyment of online learning revealed statistically significant correlations among enjoyment and preferred computer use, authentic learning, and asynchronicity. The posttest data revealed statistically significant correlations among enjoyment and actual teacher support, personal relevance and enjoyment, and asynchronicity.

Additionally, pretest data determined that the correlation between online learning self-efficacy and enjoyment were statistically significant. Also, posttest data indicated that the correlation between academic self-efficacy and enjoyment were statistically significant.

The chapter to follow includes a summary of the study, discussion of results, study implications and recommendations, and recommendations for future research.
CHAPTER V
DISCUSSION

Introduction

The current research examined differences between traditional and nontraditional students’ attitudes about the psychosocial learning environment in their online courses and its influence on affective learning outcomes. A discussion of the study results and conclusions are detailed in this chapter, which includes a summary of the study, an overview of significant findings, conclusions associated with the research questions, study’s implications, limitations that may affect the validity or generalizability of the results, and recommendations for future study.

Summary of Study

In light of a growing need for institutions of higher learning to accommodate the lifestyles of adult learners, some modifications to academic programs include course schedule changes such as the provision of evening and weekend-format classes. However, nothing has taken off more rapidly than offering online courses, which has been essentially saturated with adult learners according to the U.S. Department of Education (2011a). Therefore, because nontraditional students make up the majority of individuals enrolling in online courses or programs, one can also assume that they are driving the demand for online education.

Many adults who are interested in attending college, whether enrolling for the first time or re-enrolling, seem not to have the time to fit their learning needs into their schedules. Further, as the adult learner may consider learning online, he or she may also express a fear about learning in an online environment. As such, there was a piqued interest in understanding how existing nontraditional students felt not only about learning
online, but also about specific attitudes the online learning environment and its influence have on learning outcomes.

The current study examined conditions that appeared problematic to nontraditional students such as socioeconomic problems that stem from the recent U.S. economic recession. Research indicated that economic recessions result in unemployment and underemployment, and individuals with a lower educational attainment level are hit the hardest. Further, Kantrowitz’s (2010) study found that there is a direct correlation between economic recessions, unemployment, and college enrollment. Mainly, during economic recessions, people enroll in college at higher rates. These findings were supported by the U.S. Department of Education (2011b) who indicated that during the economic recession period, college enrollment among nontraditional students increased by three million students, compared to enrollment rates three years prior. Additionally, the center reported that annual nontraditional student enrollment rate is expected to continue to climb by 23% between 2010 and 2019.

College enrollment and persistence trends indicated a high enrollment and low persistence rates in online education courses compared to traditional, face-to-face formats. Although the literature pointed to various student-related and course-related factors as reasons that students choose to enroll, dropout, or persist in their online courses, the current study specifically addressed psychosocial environmental factors, based on the concept that the environment largely impacts the way individuals act, think, feel, learn, and perform. Further, the purpose of the current study was to primarily examine nontraditional student attitudes toward the psychosocial learning environment in their online courses and affective outcomes that are associated with persistence and
dropout decisions. In doing so, the study examined whether there were differences between traditional and nontraditional students’ attitudes and affective outcomes.

The theoretical framework that was selected as the foundation of the current study was Rudolf Moos’ (1979) Model of the Relationship between Environmental and Personal Variables and Student Stability and Change, and includes his concept of social climate. This framework has been referenced in many education studies as the psychosocial learning environment and used in a number of educational and social settings. Initially, an individual determines whether the environment seems harmful, beneficial, or irrelevant, and the secondary appraisal involves their assessment of available coping alternatives. Students’ self-perceptions and initial perceptions about the environment help to determine the level and source of motivation and use of preferred coping skills to adapt to the environment. In return, this influences the degree of stability and change, or outcomes such as values and personal interests, aspiration and achievement levels, mood, and health. Thus, Moos’ model provided the framework for examining the interaction between personal and environmental variables, specifically exploring the differences in traditional or nontraditional and attitudes toward the psychosocial learning environment in online higher education courses.

Based on known differences between the two college student groups, an analysis of the differences that may exist between traditional and nontraditional students’ attitudes about the psychosocial learning environment and affective outcomes was the focus of the current study. The study included seven research questions: 1) Are there significant differences in attitudes toward eight psychosocial online learning environment dimensions across a semester for individuals in different college student groups?; 2) Does
undergraduate classification have an influence on traditional and nontraditional students’ attitudes about the psychosocial learning environment in an online course?; 3) Does experience taking online courses have an influence on traditional and nontraditional students’ attitudes about the psychosocial learning environment in an online course?; 4) Does being a traditional or nontraditional student influence students’ affective learning outcomes? If so, in what ways?; 5) What is the relationship between attitudes about the psychosocial learning environment in an online course and self-efficacy?; 6) What is the relationship between attitudes about the psychosocial learning environment in an online course and the enjoyment of online learning?; and 7) What is the relationship between self-efficacy and the enjoyment of online learning?

The total number of nontraditional characteristics reported was used to differentiate between college student groups. Students who reported no nontraditional characteristics were identified as traditional, and students reporting one or more characteristics were considered nontraditional. Eight subscales measured the domains of the psychosocial learning environment in an online course including relationships (i.e., teacher support, student interaction and collaboration, and equity), personal growth and development (i.e., personal relevance and authentic learning), and system maintenance and change (i.e., computer use, student autonomy, and asynchronicity). Outcome variables included academic self-efficacy, online learning self-efficacy, enjoyment of online learning, and satisfaction at the end of the online course.

A pretest and posttest survey was administered online to a total of 151 undergraduate students taking online courses at a university located in the southeastern United States. The variables were measured using preferred and actual attitude versions
of the Online Learning Environment Survey (OLES), which included an enjoyment of online learning subscale. Other measures included a college student group survey to measure nontraditional student characteristics, the Academic Self-Efficacy and Online Learning Technology Self-Efficacy Measures, and a general student demographic scale. Student satisfaction was measured at the end of the course using a combined OLES scale, which simultaneously asked students to rate their preferred and actual attitudes on each psychosocial learning environment dimension.

Initially, the data was used to determine the reliability of each scale. The internal consistency (Cronbach alpha reliability) estimates for the pretest version of the OLES ranged from 0.71 to 0.93, the Academic Self-Efficacy scale was 0.84, and the Online Learning Technology Self-Efficacy measure was 0.88. Second, the data analyses for each research question involved the following: 1) repeated-measures ANOVA to assess differences in psychosocial learning environment attitudes, 2) analyses of significant differences to determine the influence of undergraduate classification on students’ attitudes, 3) analyses of significant differences to determine the influence of experience taking online courses on students’ attitudes, 4) within groups ANOVA to assess differences between groups’ affective learning outcomes and post hoc analyses of significant differences to determine influence of undergraduate classification and experience taking online courses, 5) simple linear correlational (Pearson r) analyses to assess associations between psychosocial learning environment attitudes and self-efficacy, 6) simple linear correlational (Pearson r) analyses to assess associations between psychosocial learning environment attitudes and enjoyment of online learning, and 7)
simple linear correlational (Pearson r) analysis to assess the association between self-efficacy and enjoyment of online learning.

Conclusions and Discussion of Results

The results of the current study are consistent with the U.S. Department of Education (2002; 2011a) findings that more nontraditional students are enrolled in online classes compared to traditional students. The findings of this study also suggest that identifying students as nontraditional should not be determined by assessing their age alone, as both older and younger students reported nontraditional characteristics. These findings are also consistent with the U.S. Department of Education’s (1996) study, which found that younger students reported fewer nontraditional characteristics than older students. A discussion of the findings and conclusions associated with each research question is provided in this section.

Are there significant differences in traditional and nontraditional students’ attitudes about the dimensions of the psychosocial learning environment in an online course across a semester?

The results of the current study found that the differences between nontraditional student attitudes toward student interaction and collaboration and asynchronicity across the semester were significantly different (p ≤ .05) than traditional student attitudes. Furthermore, nontraditional students preferred a psychosocial learning environment with less student interaction and collaboration and more asynchronicity than traditional students. These results are congruent with Kim et al.’s (2010) findings of nontraditional students’ attitudes about combining work and school. Specifically, nontraditional students consider themselves primarily employees who are students or parents and report
school-related problems associated with working, whereas traditional students consider themselves students only or students who work. The current study extends the previous findings to specific aspects of the online psychosocial learning environment that supports a primarily employee role among nontraditional students. For instance, preferences for less student interaction and collaboration and more asynchronicity supports a primarily employee role and could reduce the likelihood that the nontraditional student would report school-related problems associated with working.

The results of this study also indicated that traditional and nontraditional online students have similar attitudes about many aspects of the psychosocial learning environment. For example, there were no significant differences between traditional and nontraditional student attitudes about computer use, teacher support, personal relevance, authentic learning, student autonomy, and equity. Therefore, each of these aspects of the psychosocial learning environment appears important to any student taking online courses. Further, while student attitudes about computer use, personal relevance, authentic learning, and equity were high (85%; 79%; 80%; 89%) and relatively stable across the semester, there was a significant and negative difference in preferred and actual attitudes about teacher support (p<0.01; 83%; 76%) and student autonomy (p<0.05; 90%; 86%).

*Does undergraduate classification have an influence on traditional and nontraditional students’ attitudes about the psychosocial learning environment in an online course?*

The study found that undergraduate classification did not significantly influence the main effect of being a traditional or nontraditional student on attitudes about student interaction and collaboration or asynchronicity in the psychosocial learning environment.
However, the data also indicated that within groups, undergraduate classification alone influenced students’ attitudes about asynchronicity. Therefore, the data offers that the differences between freshmen (pretest: 77%; posttest: 89%), sophomores (pretest: 82%; posttest: 73%), juniors (pretest: 86%; posttest: 85%), and seniors’ (pretest: 83%; posttest: 89%) attitudes about asynchronicity was significant (p<0.01). These findings conclude that while academic experience does influence student attitudes, the differences were not necessarily parallel such as a higher academic level did not mean that students had a higher attitude about asynchronicity. Also, undergraduate classification within traditional and nontraditional groups influenced students’ asynchronicity scores; thus, there were significant differences (p<0.05) between traditional freshmen, sophomores, juniors, and seniors or nontraditional freshmen, sophomores, juniors and seniors.

*Does experience taking online courses have an influence on traditional and nontraditional students’ attitudes about the psychosocial learning environment in an online course?*

The study also found that experience taking online courses did not significantly influence the difference between traditional and nontraditional student attitudes about student interaction and collaboration or asynchronicity in the psychosocial learning environment. These findings are consistent with Moos’ (1979) theory that the relationship between environmental and personal variables (i.e., sociodemographic variables, expectations, personality factors, coping skills, attitudes) influences students’ cognitive appraisal of the environment rather than their level of experience taking online courses, as each environment is different.
Does being a traditional or nontraditional student influence students’ affective learning outcomes including the stability or change in self-efficacy, enjoyment of online learning, and student satisfaction?

Unlike Spitzer’s (2000) study that found differences between traditional and nontraditional students’ career decision making self-efficacy and self-efficacy improvement, the current study did not find a significant difference between traditional and nontraditional students’ academic or online learning self-efficacy. The current results also indicated that both traditional and nontraditional students indicated a high level of academic (traditional: 88%; nontraditional: 86%) and online learning (traditional: 70%; nontraditional: 69%) self-efficacy, which remained stable over time. This study extends the previous findings of other studies to include an assessment of self-efficacy based on the differences in students’ nontraditional characteristics in relation to the assessment of traditional and nontraditional students’ self-efficacy based on age differences.

The present study also found that the differences between nontraditional student enjoyment of online learning across the semester were significantly different (p< 0.05) than traditional student attitudes, and nontraditional students reported a higher degree of enjoyment of online learning compared to traditional students. In fact, nontraditional student enjoyment of online learning improved from 71 to 74% from the pretest to posttest, whereas traditional student enjoyment of online learning decreased from 60 to 58% by the end of the semester. These differences may relate to this study’s findings of the positive relationship between enjoyment of online learning and preferred computer
use, preferred asynchronicity, and actual asynchronicity, in that, nontraditional students also had more favorable attitudes in these areas compared to traditional students.

Relative to student satisfaction, the results indicated that nontraditional student satisfaction of asynchronicity was significantly different (p<.01) than traditional student attitudes, and nontraditional students had a higher degree of satisfaction than traditional students. The results of this study also indicated that traditional and nontraditional online student satisfaction of the psychosocial learning environment is similar. Both traditional and nontraditional students reported higher preferred than actual attitudes about each area of the psychosocial learning environment. These results are consistent with Trinidad et al.’s (2005) and Fraser’s (1998, 2002) findings that learners prefer a learning environment more than the one perceived as actually present. Furthermore, the current study found that students were satisfied with computer usage, as the difference between their preferred and actual scores at the end of the course were not statistically significant. However, the study showed that there were significant differences in students’ preferred and actual teacher support (p<0.01), student interaction and collaboration (p<0.01), personal relevance (p<0.01), authentic learning (p<0.01), student autonomy (p<0.01), equity (p<0.01), and asynchronicity scores (p<0.05).

This study also found that students preferred some dimensions of the psychosocial learning environment more so than other areas. Students’ preferences for the online psychosocial learning environment were ordinaily ranked and compared to their actual attitudes about the environment, which included student autonomy (pretest: 95%; posttest: 86%), equity (pretest: 94%; posttest: 89%), teacher support (pretest: 90%; posttest: 76%), asynchronicity (pretest: 88%; posttest: 84%), authentic learning (pretest:
86%; posttest: 75%), computer use (pretest: 85%; posttest: 83%) personal relevance (pretest: 85%; posttest: 74%), and student interaction and collaboration (pretest: 70%; posttest: 62%).

What is the relationship between attitudes about the dimensions of the psychosocial learning environment in an online course and self-efficacy?

The current study found that preferred teacher support and particularly preferred student interaction and collaboration, authentic learning, student autonomy, equity, and asynchronicity were positively associated with academic self-efficacy at the beginning of the course. At the end of the course, actual teacher support, authentic learning, and student autonomy, and particularly actual computer use, personal relevance, and equity were positively associated with academic self-efficacy. The results of this study were consistent with Fisher et al.’s (2001) findings of a positive relationship between learning environment attitudes and students’ academic self-efficacy and extended their findings to higher education online environments. Although there were no significant relationships between students’ learning environment attitudes and online learning technology self-efficacy at the beginning of the course, student autonomy was positively associated with online learning technology at the end of the course.

What is the relationship between attitudes about the dimensions of the psychosocial learning environment in an online course and the enjoyment of online learning?

Unlike Trinidad et al. (2005), who found that all eight learning environment scales were statistically significant and positively associated with student enjoyment, the current study found that preferred authentic learning and particularly preferred computer use and asynchronicity were statistically significant and positively associated with
enjoyment at the beginning of the online course. However, it reveals that actual teacher support, personal relevance, and asynchronicity were statistically significant and positively associated with enjoyment at the end of the course.

What is the relationship between self-efficacy and the enjoyment of online learning?

The research findings indicated that student academic self-efficacy was not related to their enjoyment of online learning at the beginning of the course; however, the relationship was statistically significant and positively related at the end of the course. Student online learning self-efficacy was statistically significant and positively related to enjoyment of online learning at the beginning of the course, but was not statistically significant at the end of the course. The study also found significant positive changes in students’ enjoyment of online learning by the end of course, but students’ self-efficacy did not change significantly. Taken together, the findings suggested that students’ initial beliefs about their ability to use the technologies to perform well in the online environment were associated with how much they initially enjoy online learning. These findings are consistent with Bandura’s (1977) findings of the influence of self-efficacy on one’s selection or choice of activities or settings. Over time, as students are exposed to and successful in the learning environment, enjoyment becomes more so associated with student expectations about their academic performance.

Implications and Recommendations

Based on the research findings and conclusions, there are course design implications for online instructors and administrators and enrollment/persistence related implications for online students. The implications for online instructors and administrators include using instructional design methods that target the psychosocial
needs of online students because assessment precedes the design, development, and implementation of effective learning courses and programs. Teachers need to take into account how the physical design of their online courses influence student attitudes about their psychosocial learning environment. Primarily, teachers should assess whether their current use of communication and instructional tools, course materials, and course delivery methods encourage or discourage a favorable response from online learners.

Second, teachers need to consider how the design of their course can influence traditional and nontraditional students differently.

Recommendations for online instructors and course designers include critically assessing and redesigning course materials to improve both traditional and nontraditional student attitudes about teacher support and student autonomy, which significantly and negatively changes across the semester. In particular, students reported negative attitudes about teacher feedback, availability, and being able to make decisions about learning. Emailing, discussion board posting, and using prerecorded or live video and audio chat tools can provide communication methods that assist online instructors in developing activities to improve student-teacher relationships and student attitudes about teacher support. Activities need to focus on helping students identify problem areas, providing thoughtful and detailed comments about students’ work such as giving feedback on students’ progress and completed assignments and scheduling time to adequately address and promptly respond to students’ questions. Designing activities for student autonomy includes a particular focus on allowing students to make decisions about their own learning and learning approaches such as having students create learning goals and engage in the assessment of targeted goals throughout the course.
Design activities for classrooms with primarily nontraditional students need to focus on providing more asynchronicity and less student interaction and collaboration, whereas classrooms with primarily traditional students need to focus on less asynchronicity and more student interaction and collaboration. However, teachers cannot design different psychosocial learning environments for traditional and nontraditional students taking the same online course; thus, there are design recommendations that help create a beneficial environment for both groups. For example, students have different attitudes about asynchronicity in the online classroom, and teachers need to take into account the degree that asynchronous activities appear beneficial or harmful to students. Meaning, there needs to be a balance in the use of activities such as discussion posting or having students participate in so-called live class meetings through Skype. Also, student interaction and collaboration activities need to focus on rapport-building or placing students in small groups of no more than three students.

Teachers should also take into account designing course materials that support student enjoyment of online learning. As students are forming primary appraisals about how well they may enjoy online learning in their course, teachers need to develop materials that particularly support computer use, authentic learning, and asynchronicity. Designing course activities that promote teacher support, personal relevance, and asynchronicity also ensures that students maintain a high level of enjoyment of online learning throughout the course. While computer use involves using the computer for communicating with others and completing course-related activities, authentic learning activities may include developing Web-based scavenger hunts or case studies designed to introduce concepts (i.e., students may gather related information about the Stock Market).
that will be discussed in the course. Teachers can design activities that support personal relevance by giving students personal choices in completing assignments such as topic selection, using video or other materials from field experts, or having learners relate their instruction to future goals. To improve student satisfaction, the findings suggest that online instructors can assess students’ preferred psychosocial learning environment and design materials accordingly.

In terms of enrollment and persistence decisions about online education on part of the online student, the implications of the research findings suggest an increased awareness of the psychosocial factors and their influence on outcomes, which are useful when making enrollment decisions. Besides selecting online learning for its convenience, students need to understand the abilities and limitations of the online learning environment to meet their psychosocial needs. Informed decision making is prudent to successfully complete one’s education goals, and students need to consider how the degree of relationships, opportunities for personal growth and development, and system maintenance and change in an online course may influence their persistence decisions and behavior.

Limitations

There were some important limitations worth mentioning that impeded the quality of the current research study. First, the type of sampling design made the analysis of groups in specific psychosocial learning environments impossible to assess. Specifically, the sampling could not assess whether traditional or nontraditional student attitudes were any different when learning in the same psychosocial learning environment. The preferred and planned data collection method was a random clustered sampling design.
This method involved contacting online teaching faculty members who were asked to allow the researcher to distribute the online survey to students in their online courses. As several teachers expressed concerns about being able to identify their online class and declined to participate in the study for various reasons, this method yielded low participation within and between the clusters. Consequently, the study was opened to any student taking online classes during the data collection period and distributed to all students and faculty through the university’s email database, resulting in a completely anonymous sample. Therefore, no inferences could be made about students’ attitudes in different types of online classroom environments (i.e., comparing the psychosocial learning environment attitudes in beginner versus advanced courses; comparing the psychosocial learning environments of online English versus Science courses).

The study was also limited relative to determining the attitudes of students who may have dropped out of their online courses. Further, some students who participated in the pretest survey chose not to participate in the posttest survey, and whether the decision to not complete the study was due to course withdrawal rather than a voluntary withdrawal from the study is not known. The study was unable to account for so-called non-persisters.

Last, there were limitations relating to the student group sample size, as the number of traditional to nontraditional students was unequal, and 70% of the sample had at least one or more nontraditional student characteristics. Further, an analysis of traditional students versus minimally, moderately, and highly nontraditional students was initially conducted, but the between group differences were minimized as a result of comparing four groups. Taken together, having a larger, even sampling of traditional and
nontraditional students, including the three types of nontraditional students, may have influenced the study’s results.

**Recommendations for Future Research**

Based upon the results of the current study, future studies examining instructional design methods to improve student satisfaction of the psychosocial learning environment are recommended. Further, exploring the influence of the physical setting and psychosocial learning environment on student attitudes and performance could add to the current literature relating to the influence of environmental factors on cognitive and affective learning outcomes. Perhaps such findings could be coupled with persistence and dropout variables to develop resources for faculty to target persistence in online education among college students. The combined effects of such knowledge could be useful for campuses that desire to strategically improve online enrollment and retention of online learners. Additionally, a study that explicates dropout factors and their associations to attitudes about the psychosocial learning environment could further address online course dropout prevention. Also, examining the psychosocial learning environments of students from private versus public institutions and/or across different academic fields would be helpful toward understanding the learning experiences of students from various campuses and learning communities.

In consideration of the abovementioned studies, more quantitative research studies that target a group of students in an online course are recommended when assessing the preferred or actual psychosocial learning environment, and using the pretest/posttest methods is an effective way to measure changes that occur. However, few qualitative studies have been conducted, but are recommended, when examining
complex issues relating to outcomes such as student dropout and persistence. Such phenomenon needs to employ methods such as collective case studies that permit the researcher to examine a group of traditional and nontraditional learners in a classroom over time. These methods will help the research community, administrators, and online teachers to understand the reasons why students select online learning, make appraisals about the psychosocial learning environment, employ different coping strategies, and make persistence or dropout decisions about the online classroom. This type of research also needs to occur across a semester or in a longitudinal study that may include following students throughout their online programs. Moreover, when combined with federal, state, and institution related initiatives, the research and development of favorable psychosocial learning environments can promote a strategic and holistic effort at all levels, help reduce dropout problems in online higher education, and improve student retention over time among nontraditional learners.
APPENDIX A

PRETEST AND POSTTEST SURVEYS

Pretest Survey

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Consent is hereby given to participate in the study titled:

Being Nontraditional and Learning Online: Assessing the Psychosocial Learning Environments, Self-Efficacy, and Affective Outcomes among College Student Groups

1. **Purpose**: The purpose of this research study is to investigate nontraditional students' attitudes toward the psychosocial learning environment in online courses and relationships between their perceived learning environment and affective outcomes. However, the study also distinguishes between nontraditional and traditional college students' attitudes to determine whether being a nontraditional student influences such attitudes. This research may result in conference presentations and journal articles.

2. **Description of the Study**: In this study, students currently enrolled in online classes will be asked to participate in a pre-test and post-test online survey, and the data will be electronically recorded. The survey will be 15 to 20 minutes in duration. Any information you provide will be kept confidential and your identity will not be revealed, by name or description. You will be asked to provide an email address for correspondence during the study and an identification code consisting of the last three digits of your student identification number and the first two letters of your mother’s maiden name. This code will be used as an internal data reference. Also, this study should not interfere with your normal class activities and can be completed within one week of distribution at each survey interval for your convenience.

3. **Benefits**: While there may be no immediate direct benefits to you for participating in this study it is hoped that a better understanding of how traditional and nontraditional college students collectively feel about the psychosocial learning environment in their online courses will be the result of this research.

The researcher also hopes that online instructors in the future may benefit from a description of the types of psychosocial learning environments that are preferred and actually exist in online postsecondary courses, the role of self-efficacy in students' attitudes, potential differences between nontraditional and traditional student groups in online education, and the considerations for student satisfaction beyond the typical end of term course evaluations. Online learners may indirectly benefit from the insight that their online instructor may gain as a result of this research by participating in an improved online learning experience. Additionally, a small monetary incentive, a chance to win one of ten $15.00 gift cards to either Starbucks or Walmart, will be provided to randomly selected participants at the end of the this study.

4. **Risks**: The research poses no foreseeable risks to you. Please be assured that personal information about you will not be revealed, so that you may answer freely about your experiences without fear of negative consequences. Also, the researcher has taken all the known precautions to ensure that information is protected and kept confidential.

5. **Confidentiality**: While there is no way to guarantee absolute confidentiality in the collection of electronic data, the researcher has implemented safeguards to protect personally identifiable information using some recommended best practices in accordance to IRB guides to internet-based research practices. Online survey responses will be maintained electronically through a secure, web-based log-in and password system. Only the researcher will have access to the data. No identifying information will be recorded in the surveys; only unique codes will be used to identify research participants and course
132
Please indicate the answer choice that best describes YOUR Major.

- ACC- Accounting
- ADE- Adult Education
- AEC- Construction
- ANT- Anthropology
- ARE- Art Education
- BA- Business Administration
- BCT- Construction Engineering Technology
- BSC- Biological Sciences
- CD- Child Development
- CHE- Chemistry & Biochemistry
- CHS- Community Health Sciences
- CE- Curriculum & Instruction Elementary
- CIP- Curriculum & Instruction for Primary Grades
- Curriculum & Instruction- SEC
- CISE- Curriculum, Instruction & Special Education
135

MED- Music Education
MGT- Management
MLS- Medical Laboratory Science
MUS- Music
NFS- Nutrition & Food Systems
NSG- Nursing
PH- Philosophy
PHY- Physics
PS- Political Science
PSC- Polymer Science
PSY- Psychology
REF- Research & Foundations
REL- Religion
SCS- School Counseling Services
SHS- Speech & Hearing Sciences
SME- Center for Science & Math
SOC- Sociology
SPA- Spanish
SPE- Special Education
TM- Tourism Management
TSL- Foreign Languages- TESOL
WTD- Workforce Training Development

Instructions- Online Learning Environment

The following items contain statements about practices that might take place in a class and/or an online learning experience. There are no "right" or "wrong" answers. Please think about how well each statement describes what you PREFER to take place (a wish list). Ex: I (prefer to) use the computer to email assignments to my teacher.

Be sure to select one response for each item.

### Computer Use

**I use the computer to email assignments to my teacher.**

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<thead>
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**I use the computer to ask the teacher questions.**

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**I use the computer to find out information about the course.**

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**I use the computer to read lesson notes prepared by the teacher.**

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**I use the computer to find out information about how my work will be assessed.**

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**I use the computer to take part in online discussions with other students.**

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### Teacher Support

**If I have an inquiry, the teacher finds the time to respond.**

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**The teacher helps me identify problem areas in my study.**

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**The teacher responds promptly to my questions.**

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The teacher gives me valuable feedback on my assignments.

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The teacher adequately addresses my questions.

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The teacher encourages my participation.

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It is easy for me to contact the teacher.

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The teacher provides me with useful feedback on my work.

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Student Interaction & Collaboration

I can work with others.

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I can relate my work to other's work.

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I share information with other students.

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I discuss my ideas with other students.

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I can collaborate with other students in the class.

2/15/2014

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I am involved in group work as part of my activities.

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I can relate what I learn to my life outside of the class.

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I am able to pursue topics that interest me.

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I apply my everyday experiences in the class.

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I link class work to my life outside the class.

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I learn things about the world outside of the class.

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Authentic Learning

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I study real cases related to the class activities.

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I use real facts in class activities.

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I work on assignments that deal with real-world information.

I work with real examples.

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I apply real world experience to the topic of study.

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Student Autonomy

I make decisions about my learning.

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I work during times I find convenient.

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I am in control of my learning.

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I play an important role in my learning.

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I approach learning in my own way.

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Equity

The teacher gives as much attention to my questions as to other students' questions.

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I get the same amount of help from the teacher, as do other students.

### Questionnaire on Student Experience

#### Comparison of Treatment

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<tbody>
<tr>
<td>I am treated the same as other students in this class.</td>
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#### Encouragement

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<tr>
<td>I receive the same encouragement from the teacher as other students do.</td>
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#### Opportunity for Contributions

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<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get the same opportunity to contribute to class discussions as other students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Recognition of Work

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>My work receives as much praise as other students' work.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Opportunity for Questions

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get the same opportunity to answer questions as other students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Enjoyment

#### Online Learning Preferences

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer online learning.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Excitement

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online learning is exciting.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Time Worthiness

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online learning is worth my time.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### Enjoyment of Studying

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoy studying online.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
I would enjoy my education if more of my classes were online.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

I am satisfied with this online class.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

Asynchronicity  

I access the discussion forum at places convenient to me.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

I read posted messages at times that are convenient to me.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

I take time to think about my messages before I post them.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

The process of writing and posting messages helps me to think.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

I find it useful to have a written record of messages to refer back to.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

I find that posting messages improves my writing skills.  
Almost Never  Seldom  Sometimes  Often  Almost Always  

Academic Self-Efficacy  

I know how to schedule my time to accomplish my tasks.  
Very Untrue  .  .  .  .  Very True  

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very Untrue</th>
<th>Very True</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know how to take notes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I know how to study to perform well on tests.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am good at research and writing papers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a very good student.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually do very well in school and at academic tasks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find my academic work interesting and absorbing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very capable of succeeding at this college.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Online Learning Technology Self-Efficacy Measure**

For each of the ten statements below, please rate your level of confidence using a 10-point scale from 1 (Not at all Confident) to 10 (Totally Confident).

I can do my best in this course using BlackBoard as an online learning tool if...

<table>
<thead>
<tr>
<th>Not at all Confident</th>
<th>Moderately Confident</th>
<th>Totally Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

...I had never used Blackboard or similar software.

---

...there was no one around to tell me what to do as I go.

...I had only a student user manual for reference.

...I had seen other students using Blackboard before trying it myself.

...I could call someone for help if I got stuck using Blackboard.

...the instructor or someone else helped me get started.

...I had more time to complete the course-related work.

...I just had the built-in online help desk for assistance if I had problems using the system.

...the instructor or someone else showed me how to use Blackboard first.

...I had used similar online learning packages in other courses before using Blackboard.

College Student Group

What date (mm/dd/yyyy) did you complete your high school education? (If you are unsure of the exact date, please estimate the day and enter the exact month and year.)
Did you receive a standard high school diploma?

- ○ Yes
- ○ No

Did you enroll in college the same year that you completed high school?

- ○ Yes
- ○ No

What date (mm/dd/yyyy) did you enter into college? (If you are unsure of the exact date, please estimate the day and enter the exact month and year.)

Have you enrolled full time for this semester (Fall 2013)?

- ○ Yes
- ○ No

Please read the following items carefully and select either Yes or No.

<table>
<thead>
<tr>
<th>Question</th>
<th>Select the best answer choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were you born before January 1, 1990?</td>
<td>○ ○</td>
</tr>
<tr>
<td>As of today are you married?</td>
<td>○ ○</td>
</tr>
<tr>
<td>At the beginning of the 2013-2014 school year, will you be working on a master's or doctorate program (such as an MA, MBA, MD, JD, PhD, EdD, or graduate certificate, etc.)?</td>
<td>○ ○</td>
</tr>
<tr>
<td>Are you currently serving on active duty in the U.S. Armed Forces for purposes other than training?</td>
<td>○ ○</td>
</tr>
<tr>
<td>Are you a veteran of the U.S. Armed Forces?</td>
<td>○ ○</td>
</tr>
<tr>
<td>Do you have children who will receive more than half of their support from you between July 1, 2013 and June 30, 2014?</td>
<td>○ ○</td>
</tr>
<tr>
<td>Do you have dependents (other than your children or spouse) who live with you and who receive more than half of their support from you, now through June 30, 2014?</td>
<td>○ ○</td>
</tr>
<tr>
<td>At any time since you turned age 13, were both your parents deceased, were you in foster care or were you a dependent or ward of the court?</td>
<td>○ ○</td>
</tr>
<tr>
<td>As determined by a court in your state of legal residence, are you or were you an emancipated minor?</td>
<td>○ ○</td>
</tr>
<tr>
<td>As determined by a court in your state of legal residence, are you or were you in legal guardianship?</td>
<td>○ ○</td>
</tr>
<tr>
<td>At any time on or after July 1, 2012, did your high school or school district homeless liaison determine that you were an unaccompanied youth who was homeless?</td>
<td>○ ○</td>
</tr>
<tr>
<td>At any time on or after July 1, 2012 did the director of an emergency shelter or transitional housing program funded by the U.S. Department of Housing and Urban Development</td>
<td>○ ○</td>
</tr>
</tbody>
</table>
2/15/2014

Quatrices Survey Software

determine that you were an unaccompanied youth who was homeless?
At any time on or after July 1, 2012 did the director of a runaway or homeless youth basic
center or transitional living program determine that you were an unaccompanied youth who
was homeless or were self-supporting and a risk of being homeless?

Are you currently working 35 or more hours per week this month?

* ○ Yes
  ○ No

Do you have non-spouse dependents (i.e., children, elder parents, siblings, other family) who live with
you and who receive more than half of their support from you?

* ○ Yes
  ○ No

Are you married or separated?

* ○ Yes
  ○ No

Did you complete high school by either passing a General Education Development (GED) exam or other
equivalency exam or receive a certificate of high school completion?

* ○ Yes
  ○ No

What is your classification?
○ Freshman
○ Sophomore
○ Junior
○ Senior

Demographic Questionnaire

What is your age?

* ○ 18-24
  ○ 25-34
  ○ 35 and older

What is your gender?
- Male
- Female

Which of the following explains your race-ethnicity?
- Asian/Pacific Islander
- Black, non-Hispanic
- Hispanic
- American Indian/Alaskan Native
- White, non-Hispanic
- Other

Which best describes the degree/program that you are currently pursuing?
- Associate's Degree
- Bachelor's Degree
- Certificate Program
- Graduate Degree

Please indicate the number of online courses that you have taken prior to this semester.
- 0 (This is my first online course)
- 1-2
- 3-4
- 5 or more

I am taking this course as a(n):
- Elective

What are your living arrangements?

- [ ] On-campus
- [ ] Off-campus
- [ ] Off-campus living with family
- [ ] Off-campus living with non-family

Email

You're just about done! Please enter your email address to be entered into a drawing for a chance to win a $15.00 gift card to Walmart or Starbucks. Your personal information will be used to contact you during this study but will NOT be used as part of this study.

_________________________________________________________
2/15/2014 Qualcomm Survey Software

Actual Online Learning Environments & Student Outcomes
Block 18

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Consent is hereby given to participate in the study titled:

Being Nontraditional and Learning Online: Assessing the Psychosocial Learning Environments, Self-Efficacy, and Affective Outcomes among College Student Groups

1. Purpose: The purpose of this research study is to investigate nontraditional students' attitudes toward the psychosocial learning environment in online courses and relationships between their perceived learning environment and affective outcomes. However, the study also distinguishes between nontraditional and traditional college students' attitudes to determine whether being a nontraditional student influences such attitudes. This research may result in conference presentations and journal articles.

2. Description of the Study: In this study, students currently enrolled in online classes will be asked to participate in a pre-test and post-test online survey, and the data will be electronically recorded. The survey will be 10 to 15 minutes in duration. Any information you provide will be kept confidential and your identity will not be revealed, by name or description. You will be asked to provide an email address for correspondence during the study and an identification code consisting of the last three digits of your student identification number and the first two letters of your mother's maiden name. This code will be used as an internal data reference. Also, this study should not interfere with your normal class activities and can be completed within one week of distribution at each survey interval for your convenience.

3. Benefits: While there may be no immediate direct benefits to you for participating in this study it is hoped that a better understanding of how traditional and nontraditional college students collectively feel about the psychosocial learning environment in their online courses will be the result of this research.

The researcher also hopes that online instructors in the future may benefit from a description of the types of psychosocial learning environments that are preferred and actually exist in online postsecondary courses, the role of self-efficacy in students' attitudes, potential differences between nontraditional and traditional student groups in online education, and the considerations for student satisfaction beyond the typical end of term course evaluations. Online learners may indirectly benefit from the insight that their online instructor may gain as a result of this research by participating in an improved online learning experience. Additionally, a small monetary incentive, a chance to win one of ten $15.00 gift cards to either Starbucks or Walmart, will be provided to randomly selected participants at the end of this study.

4. Risks: The research poses no foreseeable risks to you. Please be assured that personal information about you will not be revealed, so that you may answer freely about your experiences without fear of negative consequences. Also, the researcher has taken all the known precautions to ensure that information is protected and kept confidential.

5. Confidentiality: While there is no way to guarantee absolute confidentiality in the collection of electronic data, the researcher has implemented safeguards to protect personally identifiable information using some recommended best practices in accordance to IRB guidelines to internet-based research practices. Online survey responses will be maintained electronically through a secure, web-based login and password system. Only the researcher will have access to the data. No identifying information will be recorded in the surveys; only unique codes will be used to identify research participants and course information, which will be used to complete pre-test and post-test comparative analyses. Any list created that links your personal identification to an identification code will be destroyed to anonymize the data.

6. Participant's Assurance: Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted) the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Questions concerning the research should be directed to Rostyn L. Warren at 601-307-3017 or rostyn.warren@eagles.usm.edu. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 18 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form will be given to the participant.

7. Electronic Consent: Please select your choice below. Clicking on the "agree" button below indicates that:

2/10/2014

You have read the above information
- You voluntarily agree to participate
- You are at least 18 years of age

☐ Agree
☐ Disagree

By selecting "disagree", you have either declined to consent to your participation in this study or are under the age of 18 years old. In doing so, you will not be able to complete this survey. Would you like to discontinue your participation?

☐ Yes
☐ No

Unique Identification Code

Please enter your identification code. The code includes the last 3 digits of your USM student id and the first two letters of your mother's maiden name (i.e., 786Ba).

About the Online Course

Please indicate subject that best describes the online course that you are taking:

- ACC: Accounting
- ADE: Adult Education
- AEC: Construction
- ANT: Anthropology
- ARE: Art Education
- BA: Business Administration
- BCT: Construction Engineering Technology
- BSC: Biological Sciences
- CD: Child Development
- CHE: Chemistry & Biochemistry
- CHS: Community Health Sciences
- CIE: Curriculum & Instruction Elementary
- CP: Curriculum & Instruction for Primary Grades
- Curriculum & Instruction- SEC
- CISE: Curriculum, Instruction & Special Education
- CJ: Criminal Justice
- Communication Studies
- COS: Computational Sciences
- CSC: Computer Science
- DAN: Dance
- ED: Economic Development
- EDA: Educational Administration
- ENG: English
- ESC: Environmental
2/15/2014

Quartics Survey Software

Please indicate the answer choice that best describes YOUR Major.

- ACC - Accounting
- ADE - Adult Education
- AEC - Construction

Did you drop this online course? (If the course was dropped, please complete the survey based on your attitudes of the course prior to dropping)
- Yes
- No

Please indicate the time that the online course was dropped.
- Within the first 2-4 weeks of class
- Mid-semester
- Near the end of the course

Instructions Online Learning Environment

Preferred
The following items contains statements about practices that might take place in a class and/or an online learning experience. There are no "right" or "wrong" answers. Your opinion is what is wanted. Please think about how well each statement describes what you prefer to take place (a wish list).

Actual
The following items also contain statements about practices that actually take place in this class and your online learning experiences. There are no "right" or "wrong" answers. Your opinion is what is wanted. Please think about how well each statement describes what you have actually taken place in this class.

Be sure to select one response for each preferred and actual item.

Computer Use

Computer Use

<table>
<thead>
<tr>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
</tr>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
</tr>
</tbody>
</table>

1. I use the computer to email assignments

https://canvas.us2.qualtrics.com/ConcentratePanelSurveyPrintPreviewLT=3Wnpj5
### Teacher Support

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</tbody>
</table>

1. If I have an inquiry, the teacher finds the time to respond.
2. The teacher helps me identify problem areas in my study.
3. The teacher responds promptly to my questions.
4. The teacher gives me feedback.

---

[https://example.com](https://example.com)
### Student Interaction & Collaboration

#### Interaction & Collaboration

<table>
<thead>
<tr>
<th></th>
<th>Preferred</th>
<th></th>
<th>Actual</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Almost Never</td>
<td>Seldom</td>
<td>Sometimes</td>
<td>Often</td>
</tr>
<tr>
<td>1. I can work with others.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I can relate my work to other's work.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I share information with other students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I discuss my ideas with other students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I can collaborate with other students in the class.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I am involved in group work as part of my activities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

### Personal Relevance

<table>
<thead>
<tr>
<th>Relevance</th>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
<td>Sometimes</td>
</tr>
<tr>
<td>1. I can relate what I learn to my life outside of this class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am able to pursue topics that interest me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I apply my everyday experiences in class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I link class work to my life outside of this class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I learn things about the world outside of this class.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Authentic Learning

<table>
<thead>
<tr>
<th>Authentic Learning</th>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
<td>Sometimes</td>
</tr>
<tr>
<td>1. I study real cases related to the class activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I use real facts in class activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I work on assignments that deal with real-world information.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Student Autonomy

<table>
<thead>
<tr>
<th>Student Autonomy</th>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I make decisions about my learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I work during times I find convenient.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I am in control of my learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I play an important role in my learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I approach learning in my own way.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Equity

<table>
<thead>
<tr>
<th>Equity</th>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher gives as much attention to my questions as to other students' questions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I get the same amount of help from the teacher, as do other students.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/15/2014</td>
<td>Qualtrics Survey Software</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>I prefer online learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
<td>Sometimes</td>
</tr>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

| Online learning is exciting. |  |
| Almost Never | Seldom | Sometimes | Often | Almost Always |
| ○ | ○ | ○ | ○ | ○ |

| Online learning is worth my time. |  |
| Almost Never | Seldom | Sometimes | Often | Almost Always |
| ○ | ○ | ○ | ○ | ○ |

| I enjoy studying online. |  |
| Almost Never | Seldom | Sometimes | Often | Almost Always |
| ○ | ○ | ○ | ○ | ○ |

| I would enjoy my education if more of my classes were online. |  |
| Almost Never | Seldom | Sometimes | Often | Almost Always |
| ○ | ○ | ○ | ○ | ○ |

**I am satisfied with this online class.**

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Asynchronicity**

<table>
<thead>
<tr>
<th>Preferred</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
</tr>
<tr>
<td>Almost Never</td>
<td>Seldom</td>
</tr>
</tbody>
</table>

1. I access the discussion forum at places convenient to me.

2. I read posted messages at times that are convenient to me.

3. I take time to think about my messages before I post them.

4. The process of writing and posting messages helps me to think.

5. I find it useful to have a written record of messages to refer back to.

6. I find that posting messages improves my writing skills.

**Academic Self-Efficacy**

2/15/2014

I know how to schedule my time to accomplish my tasks.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I know how to take notes.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I know how to study to perform well on tests.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I am good at research and writing papers.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I am a very good student.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I usually do very well in school and at academic tasks.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I find my academic work interesting and absorbing.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

I am very capable of succeeding at this college.
Very Untrue Very True
○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

Online Learning Technology Self-Efficacy Measure

For each of the ten statements below, please rate your level of confidence using a 10-point scale from 1 (Not at all Confident) to 10 (Totally Confident).

I can do my best in this course using BlackBoard as an online learning tool if...

<table>
<thead>
<tr>
<th>Not at all Confident</th>
<th>Moderately Confident</th>
<th>Totally Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21/5/2014</th>
<th>Qualtrics Survey Software</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blockboard or similar software package.</strong></td>
<td></td>
</tr>
<tr>
<td>There was no one around to tell me what to do as I go.</td>
<td></td>
</tr>
<tr>
<td>I had only a student user manual for reference.</td>
<td></td>
</tr>
<tr>
<td>I had seen other students using Blackboard before trying it myself.</td>
<td></td>
</tr>
<tr>
<td>I could call someone for help if I get stuck using Blackboard.</td>
<td></td>
</tr>
<tr>
<td>The instructor or someone else helped me get started.</td>
<td></td>
</tr>
<tr>
<td>I had more time to complete the course-related work.</td>
<td></td>
</tr>
<tr>
<td>I just had the built-in online help desk for assistance if I had problems using the system.</td>
<td></td>
</tr>
<tr>
<td>The instructor or someone else showed me how to use Blackboard first.</td>
<td></td>
</tr>
<tr>
<td>I had used similar online learning packages in other courses before using Blackboard.</td>
<td></td>
</tr>
</tbody>
</table>
Did you enroll in college the same year that you completed high school?

- Yes
- No

What date (mm/dd/yyyy) did you enter into college? (If you are unsure of the exact date, please estimate the day and enter the exact month and year.)

Have you enrolled full time for this semester (Fall 2013)?

- Yes
- No

Please read the following items carefully and select either Yes or No.

Were you born before January 1, 1989?

- Yes
- No

As of today are you married?

- Yes
- No

At the beginning of the 2012-2013 school year, will you be working on a master's or doctorate program (such as an MA, MBA, MD, JD, PhD, EdD, or graduate certificate, etc.)?

- Yes
- No

Are you currently serving on active duty in the U.S. Armed Forces for purposes other than training?

- Yes
- No

Are you or a veteran of the U.S. Armed Forces?

- Yes
- No

Do you have children who will receive more than half of their support from you between July 1, 2012 and June 30, 2013?

- Yes
- No

Do you have dependents (other than your children or spouse) who live with you and who receive more than half of their support from you, now through June 30, 2013?

- Yes
- No

At any time since you turned age 13, were both your parents deceased, were you in foster care or were you a dependent or ward of the court?

- Yes
- No

As determined by a court in your state of legal residence, are you or were you an emancipated minor?

- Yes
- No

As determined by a court in your state of legal residence, are you or were you in legal guardianship?

- Yes
- No

At any time on or after July 1, 2011, did your high school or school district homeless liaison determine that you were an unaccompanied youth who was homeless?

- Yes
- No

At any time on or after July 1, 2011 did the director of an emergency shelter or transitional housing program funded by the U.S. Department of Housing and Urban Development determine that you were an unaccompanied youth who was homeless?

- Yes
- No

At any time on or after July 1, 2011 did the director of a runaway or homeless youth basic center or transition living program determine that you were an unaccompanied youth who was homeless or were self-supporting and at risk of being homeless?

- Yes
- No

Are you currently working 35 or more hours per week this month?

- Yes
- No

Do you have non-spouse dependents (i.e., children, elder parents, siblings, other family) who live with you and who receive more than half of their support from you?

Demographic Questionnaire

What is your age?
○ 18-24
○ 25-34
○ 35 and older

What is your gender?
○ Male
○ Female

Which of the following explains your race-ethnicity?
○ Asian/Pacific Islander
○ Black, non-Hispanic
○ Hispanic
○ American Indian/Alaskan Native
○ White, non-Hispanic
○ Other

Which best describes the degree/program that you are currently pursuing?
○ Associate’s Degree
○ Bachelor’s Degree
○ Certificate Program

Please indicate the number of online courses that you have taken prior to this semester.

- 0 (This is my first online course)
- 1-2
- 3-4
- 5 or more

I am taking this course as a(n):
- Elective
- Requirement

What are your living arrangements?
- On-campus
- Off-campus living with family
- Off-campus living alone
- Off-campus living with non-family

Email

You're just about done! Please enter your email address to be entered into the drawing for a chance to win a $15.00 gift card to Walmart or Starbucks. Your personal contact information will NOT be used in this study.
APPENDIX B

WRITTEN REQUESTS AND AUTHOR PERMISSION TO REPRODUCE

RESEARCH SURVEY INSTRUMENTS

Online Learning Environment Survey

The Online Learning Environment Survey

Roslyn Warren <roslyn.warren@eagles.usm.edu>
To: S.Trinidad@curtin.edu.au

Sun, Jul 22, 2012 at 7:31 PM

Hello Dr. Trinidad,

My name is Roslyn Warren and I am a Doctoral Candidate at the University of Southern Mississippi in Hattiesburg, Mississippi. I am interested in learning more about your Online Learning Environment Survey for my Dissertation Proposal: Assessing the Psychosocial Learning Environments of Nontraditional Online Students. I have reviewed a few articles on your scale, but the website link to look at the actual scale is broken.

Also, can you explain how the Computer Usage Scale fits for online environments. I am having difficulty understanding its appropriateness, since all online learners have to use the computer to communicate with students and the instructor. I'm sure that reviewing all the scale items will also shed some light on this one as well.

Lastly, could you please provide me with additional information as to how I may review this scale. With your permission I would also like to consider its usability for my study.

Thank you in advance,

Roslyn L. Warren, Doctoral Candidate
Instructional Technology and Design
The University of Southern Mississippi
116 College Drive
Hattiesburg, MS 39406-0001
Cell: (911) 337-3977
FW: OLES-reply

Sue Trinidad <S.Trinidad@curtin.edu.au>
To: "roslyn.warren@eagles.usm.edu" <roslyn.warren@eagles.usm.edu>

Sun, Jul 22, 2012 at 8:05 PM

Dear Roslyn,

Thank you for your interest in our work.

Papers and Publications are listed here below, but the online survey is no longer working as I had to pay for the service for over 10 years and finally decided not to continue it after 2010. Attached the paper OLES instrument copies. Thank you in citing our work and acknowledging this in anticipation - kind regards SUE TRINIDAD

Refereed Journal


Papers In Refereed Conference Proceedings


Professor Sue Trinidad
PhD(Curtin), MED(Curtin), PG.DipEdComp(Curtin), BEd(ECU), DipTeach(Curtin), MACE
Faculty of Humanities
Office of the Pro-Vice Chancellor 209:228

Curtin University
Email | s.trinidad@curtin.edu.au
Web | http://curtin.edu.au
Good Morning Dr. Chermers,

My name is Roslyn Warren and I am a Ph.D. Candidate attending The University of Southern Mississippi in Hattiesburg, Mississippi. I am working on my dissertation proposal, which partially focuses on the differences between college student groups’ perceived learning environments and self-efficacy. I am interested in your research on Academic Self-Efficacy and First-Year College Student Performance and specifically the use of the academic self-efficacy instrument for my proposed research study.

With your permission, I would like to use this instrument because it appears to capture very important information on the self-efficacy of college students, unlike other research measures that I have reviewed.

I would forward to your response,

--

Roslyn L. Warren, Doctoral Candidate
Instructional Technology and Design
The University of Southern Mississippi
116 College Drive
Hattiesburg, MS 39406-0001
Cell: 601.307.3517
EAGLE

Academic Self-Efficacy Instrument

Martin Chemers <mchemers@ucsc.edu>
To: Roslyn Warren <roslyn.warren@eagles.usm.edu>
Cc: Querido Sergio S <sergioq@ucsc.edu>

Yes. I am copying my reply to my project manager who will email the measure to you.

MMC

Sent from my iPhone

Marty

[Quoted text hidden]
Hello Dr. Bates,

My name is Roslyn Warren and I am a Ph.D. Candidate attending The University of Southern Mississippi in Hattiesburg, Mississippi. I am working on my dissertation proposal, which partially focuses on the differences between college student groups’ perceived learning environments and self-efficacy. I am interested in your research on Self-efficacy and College Students’ Perceptions and use of Online Learning Systems and specifically the use of the adapted online learning technology self-efficacy measure for my proposed research study.

With your permission, I would like to review this instrument for use because it seems a good fit for my study, unlike other research measures that I have reviewed.

I look forward to your response,

--

Roslyn L. Warren, Doctoral Candidate
Instructional Technology and Design
The University of Southern Mississippi
116 College Drive
Hattiesburg, MS 39406-0001
Cell: 601.307.3517
Hi Roslyn,

Thank you for your interest in my instrument. I have attached it for your use. This version was obviously used to evaluate student’s efficacy beliefs about Blackboard but can be modified to address other technologies with some minor wording changes.

Hope this helps.

Reid

---

Reid Bates  
Professor, Human Resource Organization & Leadership Development  
School of Human Resource Education & Workforce Development  
Louisiana State University, Baton Rouge, LA 70803  
Phone: 225 578 2457  
Fax: 225 578 2955  
rbates@lsu.edu

From: Roslyn Warren <roslyn.warren@eagles.usm.edu>  
Sent: Monday, November 12, 2012 12:56 PM  
To: Reid A Bates  
Subject: Online Learning Technology Self-efficacy Measure

[Email text hidden]

Online Learning Self-Efficacy scale1.doc  
28K
APPENDIX C

IRB APPROVAL LETTER AND CONTACT LETTERS FOR RESEARCH STUDY

IRB Approval Letter

INSTITUTIONAL REVIEW BOARD
118 College Drive #35477, Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.8377 | www.usm.edu/irs

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 50, 110), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the “Adverse Effect Report Form”.
- If approved, the maximum period of approval is limited to twelve months.
- Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 1301085
PROJECT TITLE: Being Nontraditional and Learning Online: Assessing the Psychosocial Learning Environments, Self-Efficacy, and Affective Outcomes among College Student Groups
PROJECT TYPE: Dissertation
RESEARCHER(S): Roslyn L. Warren
COLLEGE/DIVISION: Department of Education & Psychology
DEPARTMENT: Curriculum, Instruction, & Special Education
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 03/06/2013 to 03/05/2014

Lawrence A. Hosman, Ph.D.
Institutional Review Board
Contact Letter to University Online Students and Staff (Pretest)

Undergraduate Students Taking Fall Online Classes Needed for Research

Dr. Taralynn Hartsell and Roslyn Warren are recruiting participants for a research study investigating undergraduate students’ attitudes about the learning environment in their online courses.

To be eligible to participate, you must be an undergraduate student and currently enrolled in an online course. In this study, you will be asked to complete an online survey lasting between 10-15 minutes. Monetary compensation will be provided at the end of this study to randomly selected participants who complete the online pre- and post-test surveys.

Click here (hyperlink) to read the informed consent and complete the survey. The deadline to complete the pre-test is Friday, Sept. 6.

This project has received approval from the university’s institutional Review Board for the ethical use of human subjects in research.

For more information, contact Roslyn Warren at Roslyn.warren@eagles.usm.edu or the research advisor, Taralynn Hartsell, at Taralynn.hartsell@usm.edu

Contact Letter to University Online Students and Staff (Posttest)

Undergraduate Students Taking Fall Online Classes Needed to Complete Post-test Survey Research

Dr. Taralynn Hartsell and Roslyn Warren are recruiting participants for a research study investigating undergraduate students’ attitudes about the learning environment in their online courses.

To be eligible to participate, you must be an undergraduate student and enrolled in an online course this semester. In this study, you will be asked to complete an online survey lasting between 10-15 minutes. Even if the course was dropped, participants are still encouraged to complete the study. Monetary compensation will be provided at the end of this study to randomly selected participants who completed the online pre- and post-test surveys. Be sure to use the SAME id code that you created for the pre-test survey.

Click here (hyperlinked) to read the informed consent and complete the survey. The deadline to complete the post-test is Friday, December 6.

This project has received approval from the university’s institutional Review Board for the ethical use of human subjects in research.

For more information, contact Roslyn Warren at Roslyn.warren@eagles.usm.edu or the research advisor, Taralynn Hartsell, at Taralynn.hartsell@usm.edu
Follow-up Correspondence for Participants (Posttest)

Dear Student,

You participated in a pre-test survey earlier this semester and are being contacted for the post-test survey. Please use the link below to complete the study.

If you have completed the survey, please disregard this message and thank you again for your time.

Undergraduate Students Taking Fall Online Classes Needed to Complete Post-test Survey Research

Dr. Taralynn Hartsell and Roslyn Warren are recruiting participants for a research study investigating undergraduate students’ attitudes about the learning environment in their online courses.

To be eligible to participate, you must be an undergraduate student and enrolled in an online course this semester. In this study, you will be asked to complete an online survey lasting between 10-15 minutes. **Even if the course was dropped, participants are still encouraged to complete the study.** Monetary compensation will be provided at the end of this study to randomly selected participants who completed the online pre- and post-test surveys. Be sure to use the SAME id code that you created for the pre-test survey.

Click here (hyperlink) to read the informed consent and complete the survey. The deadline to complete the post-test is Friday, December 6.

This project has received approval from the university’s institutional Review Board for the ethical use of human subjects in research.

For more information, contact Roslyn Warren at Roslyn.warren@eagles.usm.edu or the research advisor, Taralynn Hartsell, at Taralynn.hartsell@usm.edu

Thank you,

Roslyn L. Warren, Researcher
Department of Curriculum, Instruction, and Special Education
Instructional Technology and Design Program
The University of Southern Mississippi
118 College Drive
Hattiesburg, MS 39406-0001
APPENDIX D

INFORMED CONSENT STATEMENT

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Consent is hereby given to participate in the study titled:
Being Nontraditional and Learning Online: Assessing the Psychosocial Learning Environment, Self-Efficacy, and Affective Outcomes of College Student Groups

1. Purpose: The purpose of this research study is to investigate nontraditional students’ attitudes toward the social climate in online courses and relationships between their perceived learning environment and affective outcomes. However, the study also distinguishes between nontraditional and traditional college students’ attitudes to determine whether being a nontraditional student influences such attitudes. This research may result in conference presentations and journal articles.

2. Description of the Study: In this study, students currently enrolled in online classes will be asked to participate in a pretest and posttest online survey, and the data will be electronically recorded. The survey will be 15 to 20 minutes in duration. Any information you provide will be kept confidential and your identity will not be revealed, by name or description. You will be asked to provide an email address for correspondence during the study and an identification code consisting of the last three digits of your student identification number and the last two letters of your mother’s maiden name. This code will be used as an internal data reference. Also, this study should not interfere with your normal class activities and can be completed within one week of distribution at each survey interval for your convenience.

3. Benefits: While there may be no immediate direct benefits to you for participating in this study it is hoped that a better understanding of how traditional and nontraditional college students collectively feel about the social climate in their online courses will be the result of this research. The researcher also hopes that online instructors in the future may benefit from a description of the types of psychosocial learning environments that are preferred and actually exist in online postsecondary courses, the role of self-efficacy in students’ attitudes, potential differences between nontraditional and traditional student groups in online education, and the considerations for student satisfaction beyond the typical end of term course evaluations. Online learners may indirectly benefit from the insight that their online instructor may gain as a result of this research by participating in an improved online learning experience. Additionally, a small monetary incentive, a chance to win one of ten $15.00 gift cards to either Starbucks or Walmart, which will be provided to selected participants at the end of the pretest and posttest data collection periods.
4. **Risks:** The research poses no foreseeable risks to you. Please be assured that personal information about you will not be revealed, so that you may answer freely about your experiences without fear of negative consequences. Also, the researcher has taken all the known precautions to ensure that information is protected and kept confidential.

5. **Confidentiality:** While there is no way to guarantee absolute confidentiality in the collection of electronic data, the researcher has implemented safeguards to protect personally identifiable information using some recommended best practices in accordance to IRB guides to internet-based research practices. Online survey responses will be maintained electronically through a secure, web-based log-in and password system. Only the researcher will have access to the data. No identifying information will be recorded in the surveys; only unique codes will be used to identify research participants and course information, which will be used to complete pretest and posttest comparative analyses. Any list created that links your personal identification to an identification code will be destroyed to anonymize the data.

6. **Participant’s Assurance:** Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted) the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Roslyn L. Warren at 601-307-3917 or roslyn.warren@eagles.usm.edu. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form will be given to the participant.

7. **Signatures:** The signature of the participant is not required here, as this information will be presented electronically in the survey. At that time, you will be asked to confirm that you are at least eighteen years old and consent to participate in this study.
APPENDIX E

SURVEY MESSAGING

*Automated End of Survey Messaging*

Decline to Consent:

Thank you for your interest in this study. Unfortunately, you have declined to consent to this study or are under the age of 18 years old. If you have reached this message in error, please return to the survey and select "Agree" to participate in this study.

Survey Manager

Thank You for Completing the Pretest Survey!:

Thank you for completing the pretest survey! Your time is greatly appreciated. You have been automatically entered for a chance to win one of ten $15.00 gift cards to either Starbucks or Walmart (your choice). A drawing will be held at the end of this survey period and you will be contacted if you win a gift card.

Survey Manager
REFERENCES


Jessup-Anger, J.E. (2009). *Inspiring the life of the mind: An examination of the roles of residential college environments and motivational attributes in promoting undergraduate students’ inclination to inquire and capacity for lifelong learning*


Instructional Technology & Distance Learning, 6(1). Retrieved from http://itdl.org/journal/jan_09/article05.htm


Rovai, A. P. (2002). Building sense of community at a distance. *International Review of Research in Open and Distance Learning, 3*(1), 1-16.


Trinidad, S., Aldridge, J., & Fraser, B. (2005). Development, validation, and use of the online learning environment survey. *Australasian Journal of Educational Techn-


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