

GENERAL SELF-EFFICACY AND COURSE SATISFACTION
IN ONLINE LEARNING: A CORRELATIONAL STUDY

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GENERAL SELF-EFFICACY AND COURSE SATISFACTION IN ONLINE
LEARNING: A CORRELATIONAL STUDY

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hereby certify that, in their opinion, it is worthy of acceptance.

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Professor Patricia Antrim

Professor David Kreiner

Dedication

My husband who is my biggest fan

My boys who support me in everything I set out to do

My loving family

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ABSTRACT

A correlational study was conducted to determine the relationship between student's general self-efficacy and course satisfaction using the Sherer General Self-Efficacy Scale (SGSES) and the Strachota Student Satisfaction Survey (SSSS). Demographic information collected provided information about age, gender, academic level, and number of online courses taken. Differences in the demographic information and self-efficacy were observed as well as correlations among the questions within the SGSES and the SSSS. Younger female students reported higher levels of self-efficacy with the majority of total respondents having completed four or more online courses. Correlations between effort and capability in self-efficacy were found as well as future enrollment and learning needs. Instructor presence had a significant impact on overall course satisfaction and future enrollment. No significant relationship between general self-efficacy and course satisfaction was noted in this study. Further research is needed to strengthen the current findings and delve further into the relationship of general self-efficacy and course satisfaction.

CHAPTER ONE

INTRODUCTION TO THE STUDY

Background

The 21st century not only ushered in a new millennium, but also a new educational era. Since the dawn of early correspondence education, the number of universities and students venturing into distance education has continued to increase (Sloan-C, 2008). With the rise of the personal computer and the availability of internet access, there are seemingly no limits to educational opportunity. Between 1995 and 1998, the number of institutions offering online courses essentially tripled; in the academic year 1999-2000 alone the number of students who took at least one online course increased by 57 % (National Center for Education Statistics, 2002). Over 3.9 million students, 20% of all higher education students, were taking at least one online course during the fall of 2007, a reported 12.9 % increase over the previous year (Sloan-C, 2008). Walls of lumber and concrete are expanding with the communication super highway as students and faculty take to the web-based classroom to learn and teach.

With the staggering costs of overhead and facilities, many universities see the online environment as the perfect solution to budgetary constraints. In many respects, the online class provides revenue for the university. Students have the opportunity to continue their coursework unheeded by missing classes or poor semester offerings. Whether students are working parents looking for a convenient way to improve their mind, living in a rural area far from campus, or living with a disability creating difficulty for travel, the online classroom is the future (Schifter, 2001).

While accessibility and program offerings at most universities make distance education an institutional success, the real question falls to the success of the student. If students do not find academic success in course work, online or otherwise, the chance of them enrolling in future course work lowers significantly (Scalese, 2001). The literature is rich in research on course satisfaction as well as student success in the traditional classroom. This study will focus on student success in the online environment and the resultant impact on course satisfaction.

Student success and course satisfaction are crucial aspects of program outcome constantly measured in university settings throughout the U.S. Approximately one-third of baccalaureate institutions consider online programs to be critical, a rate about half that of other institutional types such as associates and graduate (Sloan-C, 2008). Between 1995 and 2004, spending on education increased by 42 % on average in Organization for Economic Cooperation and Development (OECD) countries as more people than ever completed secondary and university education (Hough, 2007). Part of this increased spending went to collecting data from surveys and short answer questionnaires to determine student satisfaction. These evaluation techniques asked students to rate their performance, the instructor's ability, and the overall course experience. The importance of student satisfaction ranks high in the university setting. Faculty positions, curriculum adjustments, and funding may hinge solely on the outcome of collected data (Schifter, 2001).

When examining student success, the questions that invariably arise are as follows: What are the characteristics of students that succeed? How are these students different from those who do not? What are the characteristics of students that rate high

course satisfaction? Are students who rate course satisfaction as high more likely to succeed? Many of these questions would make excellent research possibilities, but this study will focus on general self-efficacy and its potential role in course satisfaction. As in the questions mentioned before, this study seeks to examine student success and capture one key feature to determine that success: self-efficacy.

The information gained from this study will enhance the ability of institutions and instructors to determine student features leading to high course satisfaction. Studies evaluating student personality (MacGregor, 2000) and instructor-student interaction (Herbert, 2006) have shown positive outcomes in student success and satisfaction in distance education. This study will seek to address the possible relationship between general self-efficacy and course satisfaction in online learning.

Conceptual Underpinnings for the Study

There are many well-developed theories on the subject of learning. This study will be conducted through the adult learning lens. Adult learning theory has little in common with traditional learning theories often ascribed to children (Knowles, 2005). As opposed to child learning, adult learning is more self-directed and motivated from within. Adults will confront new knowledge acquisition with the vast experiential knowledge they already possess whereas children accommodate and assimilate new frames of knowledge (Lara, 2007).

The adult learning approach considers problems, inquiry, and solutions from a practical life experience position (Kasl & Yorks, 2001). According to Mezirow (2000), life situations of the adult can provide the opportunity to formulate reliable beliefs. These dependable beliefs aid in the assessment of problems and their contexts. Adults are able

to seek out informed agreement on the meaning and justification of problem solving as well as decision-making. The combination of practical life experience and development of dependable beliefs provide insights central to the adult learning process (Mezirow, 2000).

Whether the learning environment is online or traditional, application exercises provide real value to the learning process. When adult learners take new knowledge and apply past life experience, their learning increases along with their potential for positive community influence (Cranton, 2006). Tools for the promotion of transformative learning and social responsibility lie within the context of the adult learning theory.

Student satisfaction outcomes in the field of distance education is a commodity highly sought after by faculty and institutions alike (Strachota, 2003). The distance education platform holds a very specific set of challenges to instructors and students leading institutions to not only define the challenges but also meet them for optimal advantage to all parties involved (Kemp, 2002). Communication seems to be a prevailing challenge present in the literature leading instructors and institutions alike to stop and take notice (Laffy, Lin & Lin, 2006).

Moore and Kearsley (2005) point out satisfaction in students may not correlate with actual student achievement. When student satisfaction is reported, this presents a motivating factor and motivation is often a predictor of student future success (Schifter, 2001). The increase of online courses offered at institutions of higher education, along with their ever-increasing student enrollment, should give educators and administrators cause to investigate not only student satisfaction but also student achievement in detail (Kemp, 2002).

Learners who engage in distance education face challenges their traditional on-campus counterparts may never experience (Smith & Dillon, 1999). The challenges with the course platform, technology needs, communication, and interaction must be taken into account when looking at student satisfaction (Strachota, 2003). Self-efficacy may play a vital role in determining how students meet these challenges and report course satisfaction (Vekiri & Chronaki, 2008).

Self-efficacy

In his seminal work, Bandura defined self-efficacy as the belief an individual has about their capability to perform specific behaviors or tasks with success (1977). Self-efficacy is the individual's perception regarding particular behaviors and outcomes specific to them alone. For this reason, self-efficacy is situation specific or domain sensitive. Self-efficacy does not cross over from one aspect of behavior to another (Bandura, 1986). Self-efficacy provides a confidence indicator determined by the individual but exercised within the greater environment, affecting performance and beliefs about the individual's utility as well as the utility of achievement (Johnson, Hornik, & Salas 2008).

One major function of learning operates to give the individual an amount of predictability and control in the events affecting their lives (Bandura 1994). To learn is essentially to make meaning, according to Bruner (1996), and this meaning making plays a crucial role in the formation of the individual's self-efficacy beliefs. Through meaningful interpretation of events, individuals learn about their environment and themselves through tiny collections of sensory input (Bruner).

The *Strachota Student Satisfaction Survey* (SSSS) (2003) instrument was developed for use in the educational setting to measure student satisfaction as an online program evaluation outcome. Given the nature of the online environment and platform of distance education, the question-based surveys are conducive to online data collection (Symons, 2000). With the importance of measuring student satisfaction in distance education taking a high priority in the university setting, the survey remains a valuable tool with proven reliability and validity for statistical purposes (Strachota, 2006).

The *Sherer General Self-Efficacy Scale* (SGSES) uses a 5-point Likert-type scale (1) strongly disagree, (2) disagree, (3) neither agree or disagree, (4) agree, and (5) strongly agree. The sum of item scores describes general self-efficacy, the higher the score the higher the level of self-efficacy. Sherer (1982) developed the SGSES to measure “a general set of expectations that the individual carries into new situations” (p. 664). The SGSES has been the most widely used general self-efficacy measure in clinical and personality research and in organizational settings (Imam, 2007). Though Bandura stated self-efficacy was domain sensitive, research has expanded his theory to include generalization of self-efficacy. For this study, the use of SGSES explores the possible theoretical implications of generalizing self-efficacy.

Statement of the Problem

Research linking general self-efficacy and course satisfaction is inadequate (Vekiri & Chronaki 2008). Studies have examined student satisfaction and retention (Herbert, 2006), self-efficacy and gender in online learning (Chyung, 2007), and the relationship between academic motivation and social ability in online courses (Yang, Tsai, Kim, B. Cho, M, & Laffery 2006) just to name a few. Many questions remain

unanswered and untried in this research area to include the relationship between a student's level of general self-efficacy and their level of course satisfaction.

Purpose of Study

The purpose of this study was to provide information on the relationship between two variables: general self-efficacy and course satisfaction. This study will add to the current research about online courses, self-efficacy in the online environment, and predictors of online success for both instructor and student. The research from this study may serve educators in the development of online courses, providing thoughtful direction to adjust online courses accordingly. The results may provide a better understanding of students who report high levels of course satisfaction and those who report low levels of course satisfaction.

Limitations

The design of this study was quantitative in nature and descriptive. This design was selected to establish associations between the variables: general self-efficacy and course satisfaction. Participants were selected from online courses in session at the time of the study and all respondents are anonymous to the researcher. The offering of the survey to five courses taught by two instructors allow for a higher number of participants. In this higher number of participants, the researcher assumes an acceptable value of 61 participants will be reached for statistical purposes.

This study does not seek data to comfortably fit the research hypothesis. The evidence gathered aims to present alternate explanations for general self-efficacy and course satisfaction in the online learning environment. Limitations for this study include online students, technology interaction and equipment as part of the online experience.

Life responsibilities such as a career and family, computer ability, and accessibility are issues known to the online student and not the researcher. The researcher assumes these variables are features of the online student and will impact their responses on the survey.

The researcher assumes online learning is self-motivated, requiring the negotiation of the participant's time. How a student employs their time in completing the survey is a facet of the study beyond the researcher's control. Surveys not fully complete upon submission will not be accepted. There are no opportunities to resubmit once the survey has been viewed. Survey must be complete upon opening.

Respondents

In this study, subject characteristics may have had an effect on the relationship under investigation. Due to the mostly heterogeneous sample of subjects (younger, female, graduate students) the population lacked diversity. A larger population from which to sample may yield a different outcome. The possibility of measuring respondent characteristics and including them in the statistical analysis may also provide a better insight into self-efficacy. Investigating domain specific areas within the population may provide better understanding of self-efficacy levels derived from previous experience.

Similar to the Chyung (2007) study, the comparison of means for self-efficacy, gender and age in this study warrant further investigation. Though females did report a higher level of self-efficacy, the female population size was much larger than the male population. The same holds true with the comparison of means between self-efficacy and age. The youngest adult population in the study was almost half of the respondent population. For both variables, gender and age, even distribution in the respondent population may yield different results.

Surveys

Mean values for the questions measuring course satisfaction showed consistency in factors previously established by the literature to determine course satisfaction. Following the Herbert (2006), Chyung (2007), and Yang et al (2006) studies on instructor presence, demographics, and self-efficacy, this study examined these three variables. Based on the results of this study, it can be concluded the interaction of all three variables may determine student satisfaction and retention. Further research, with a specific focus on the interactions of these three variables is warranted.

Though the examination of the mean values for select questions from the survey rated respondents high in levels of general self-efficacy and moderate-high in course satisfaction, the statistical analysis did not support the hypothesis. When items added across scores were calculated, there was no significant relationship between general self-efficacy and course satisfaction found. The purpose of this study was to establish the relationship between general self-efficacy and course satisfaction primarily due to the lack of current literature on the topic.

Reflecting on the literature and the findings of this study, the researcher believes a relationship of significance may be found between the variables general self-efficacy and course satisfaction with further research. Increasing the respondent population from which to sample would be a necessary course of action (Fink 2006). The small sample size in this study did not give a broad perspective on self-efficacy trends among the respondents. An increase in the number of instructors from which the sample was taken from may provide a broader scope of information on course satisfaction. To increase the

sample size as well as focus on important the key variables (instructor presence, demographics, and self-efficacy) general self-efficacy and course satisfaction, may prove to result in a more statistically significant relationship between the variables (Symons, 2000).

Research Questions

The research questions for this study sought to address the current lack of research available in the area of course satisfaction and general self-efficacy.

1. What are the levels of general self-efficacy?
2. What are the levels of course satisfaction?
3. Is there a correlation between general self-efficacy and course satisfaction?

Research Hypothesis

Online students will rate general self-efficacy relative to their level of course satisfaction. A correlation between general self-efficacy and course satisfaction levels will determine if levels of general self-efficacy predict levels of course satisfaction.

Definition of Key Terms

The following terms are used throughout this study:

Adult Learning Theory/Andragogy: “the art and science of helping adults learn,” contrasted with pedagogy, the art and science of helping children learn (Knowles, 1980, p. 43).

Asynchronous: Unlike traditional classroom learning, asynchronous learning and/or communication in the online environment happens without the presence of synchronicity between the instructor, student or fellow students (Baath, 1983).

Constructivist Theory: A psychological theory of knowledge epistemology that posits that humans garner knowledge and meaning from experience (Mezirow, 2000).

Distance education: Distance education is education that deals with instruction in which distance and time are the necessary attributes; student and teacher (and other students) are separated by distance and/or time (Yacci, 2000).

Online Learning: A generic term used to reference education that uses Internet-based tools for instruction, also known as distance education.

Self-Efficacy: The concept of self-efficacy lay at the theoretical center of social cognitive theory. Self-efficacy is the belief in one's ability to succeed in a given situation (Bandura, 1986).

Social Cognitive Theory: Bandura's theory emphasizes the role of observational learning, social experience, and reciprocal determinism in the development of personality (Bandura, 1986).

Student Satisfaction/Course Satisfaction: The measuring of gathered feedback from students to determine their level of satisfaction in the specific course experience measured (Strachota, 2003).

Technology: Webinars, video-conferencing, online classrooms, and electronic mail (email) used to facilitate online learning, also known as distance learning.

Transformative Learning: Describes a learning process of "becoming critically aware of one's own tacit assumptions and expectations and those of others and assessing their relevance for making an interpretation" (Mezirow, 2000, p. 4).

Summary

This study examines the possible relationship between general self-efficacy and course satisfaction. As no differences in general self-efficacy have been found to impact course satisfaction in the literature, this study seeks to understand if students' levels of general self-efficacy may predict similar levels of course satisfaction.

The second chapter provides an overview of the literature regarding the areas of study that emerged upon a review of the research. The review spans Bandura's Social Cognitive Theory, the adult learner, distance education, and student satisfaction in online learning. The third chapter outlines methods used for this study to include the respondents, data collection, instruments used for data collection, and analysis. In Chapter Four, the findings from the collected data are presented. Discussion of the results and implications for further research will be presented in Chapter Five.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

The literature base for this study was rich in content. Numerous theories from Albert Bandura (1977) and Social Cognitive Theory to Malcolm Knowles (2006) and Adult Learning Theory were foundational to the development of the proposed topic. Studies from De Bourgh (1999), Moore and Kearsely (2005), and Herbert (2006) provided a framework from which to draw possible connections between course satisfaction and general self-efficacy in online learning. Together, theory and research build a strong basis for further study in the area of this correlational study. Five specific areas of study emerged through literature review and further development of the proposed topic.

The first area of study examines the historical theory of social cognition as espoused by Albert Bandura, social cognitive theory. The principles and characteristics of social cognitive theory provide the conduit through which self-efficacy emerges as a central facet of Bandura's theory (Cassidy & Eachus, 2002). The literature will show the importance of Albert Bandura's social cognitive theory to the understanding of self-efficacy beliefs.

The second area of study found in the literature examines the adult learner with the adult learning theory, andragogy (Bruner, 1996). The review will present self-efficacy concerns of adult learning, theoretical implications, and situational application of adult learning. The literature will describe the adult learner examining principles and critical

elements of learning specifically geared toward the adult learner. Basic tenants of learning theory and assumptions of adult learning theory will be explored in the literature review. The topic of motivation and the adult learner will complete this area of study.

The third area of study will focus on the distance education environment of online learning. The online environment is explored, including definition and characteristics, as well as its impact in the field of education. Historical foundations and a brief timeline demonstrate the evolution of distance education from correspondence study to the modern 21st century Internet classroom (Reiser, 2002). Select theories of distance education, reviewed from historical research, show modern day application.

Course satisfaction in distance education will be the fourth study area. The theoretical premise for this correlational study is examined here. This area of study will focus on factors contributing to course satisfaction exclusive to the online environment. A brief history of distance education and explanation of theories will be given.

The fifth and final area of study will focus on student satisfaction in online learning. Factors contributing to student satisfaction, as well as advantages to online education for the student, will be discussed. Instructor communication will be reviewed along with technology needs of the online student. This section will close with literature reviewing research in evaluation of student satisfaction and the impact of student satisfaction on retention. A full summary of the literature review will be provided at the end of this chapter.

Social Cognitive Theory

This section of the literature review will provide a background for understanding the features and theoretical aspects of social cognitive theory. Social cognitive theory

posits that behavior operates triadic reciprocity (Bandura, 1994). Behavior, cognition, and the environment share a reciprocal relationship influencing one another and thereby influencing behavior (Cassidy & Eachus, 2002). Within this triadic reciprocity, the individual will engage in situations effecting behavior that lead to subsequent perceptions about those behaviors. This is known as self-efficacy (Bandura).

Self-efficacy is defined as the belief individuals have about their capability to perform specific behaviors or tasks with success (Bandura, 1977). According to Bandura, levels of capability are determined by the individual via four principle sources of information: (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) psychological states. Self-efficacy is based on the individual's perception regarding particular behaviors and outcomes specific to them alone. For this reason, self-efficacy is considered to be situation specific or domain sensitive and does not cross over from one aspect of behavior to another (Bandura, 1986). The individual may exhibit high levels of self-efficacy when engaging in a particular behavior or when acting within one domain while simultaneously displaying low levels of self-efficacy within another domain (Bates & Khasawneh, 2007). An individual may show high levels of confidence in academic study while exhibiting low levels of confidence in sports activities (Vekiri & Chronaki, 2008).

Bandura's (1986) research points to the individual's self-efficacy as a main determinate in the outcome of any behavior one decides to engage in. If the individuals are confident in their capabilities to perform a specific task, the likelihood of said task being completed with success will continue to grow with each attempt (Bandura, 1994). Self-efficacy provides a confidence indicator determined by the individual, not exercised

within the greater environment. This confidence indicator influences performance and beliefs about the individual's ability and their ability to achieve (Johnson et al., 2008). Therefore, levels of self-efficacy in the online environment may point to levels of course satisfaction.

Performance Accomplishments

Academic success and failure has been widely studied within the construct of self-efficacy (Bates & Khasawneh, 2007). A recurring theme found in the literature concerning observation of self-efficacy levels and the individual in learning is achievement motivation (Yang, et al. 2006). Studies show a connection between achievement motivation and the role of self-efficacy beliefs in students' academic choices, learning, and academic performance (Bandura, 1997; Johnson et al., 2008). All three factors are taken into account, based on the student's cognitive appraisals and their perceptions of personal self-efficacy, to evaluate their ability to successfully perform tasks of a particular domain (Bandura, 1993).

According to Verkiri and Chronaki (2008), task-value beliefs refer to the students' reason for engaging in tasks and include the following three features: (a) utility value (usefulness of task to them specifically), (b) intrinsic value (beliefs about the enjoyment they will get from the task), and (c) attainment value (the importance of the task). Chyung (2007) found a significant effect of student interaction, in the learning environment, on academic performance. The Chyung research supports Bandura's performance accomplishment principle: students are more likely to pursue and engage in tasks they perceive as valuable, within their range of perceived competence (Bandura, 1993). Task-value, student interaction, and self-efficacy are high predictors of students'

future academic progress and success in the greater environment (Bates & Khasawneh, 2007; Chyung).

Self-efficacy beliefs play a key role in the self-regulation of motivation in the individual based on the premise of attributing most human behavior to cognitive generation (Bandura, 1994). Motivation takes thought and turns it into action along the lines the individual sets for the course of action, the intensity of the action, and the persistence of the action (Bandura). Individuals will motivate and guide themselves by exercising forethought and drawing upon performance accomplishments from past experience or mastery experiences (Hamburger, McKenna, K.Y.A., Tal, & Samuel-A, 2008).

The most effective way in which self-efficacy can be increased is through the procurement of mastery experiences (Ozer & Bandura, 1990). Mastery experiences provide the opportunity for the individual to build upon experience with success through exercise (Hamburger et al., 2008). Failure can undermine success if efficacy is not firmly established before it happens. When individuals experience easy success without an understanding of failure by experience, they later come to anticipate only quick success and can be rapidly discouraged by failure, decreasing overall motivation (Bandura, 1994). The optimal mastery experiences providing both success and failure lead to resilience in self-efficacy. Overcoming obstacles through persistent effort further reinforces current efficacy beliefs and serves to strengthen motivation directed toward future endeavors requiring sustained effort (Kurbanoglu, 2003).

Vicarious Experience

Bandura (1994) referred to the learning that takes place observing the success and failure of others as vicarious learning. Vicarious experiences, which promote learning through social models, create and strengthen self-beliefs of efficacy in the individual. When individuals see others similar to themselves succeed, individuals begin to believe they too can obtain or sustain the same success. Self-efficacy beliefs build when people compare their mastery capability to others of equal ability with successful mastery (Bandura 1986, 1995; Parajes, 2002).

The observation of failure in others individuals see as equal in capability can have the opposite effect. Individuals may believe they are incapable of mastery and will not put forth long sustained effort if others have not been rewarded (Hara & Kling, 2000). Models are only effective in self-efficacy if they are similar to the individual and there is some point of identification with the model (Bandura, 1994).

In developing self-efficacy, the greater the assumed similarity to the model, the greater the increase in self-efficacy beliefs fostered in the individual observing the model. In Kurbanoglu's (2003) study correlating self-efficacy and information and computer literacy, the importance of identification between the individual and the model was seen. The model's behavior will have very little to no impact on the individual if the individual does not view the model as competent and worthwhile. Models are not a passing influx of efficacy possibilities but instead are carefully selected by the individual. Most individuals will seek out models they believe are proficient and possess the competencies they themselves need to master a particular task.

The competent model is perceived as the one who, through behavior and expressed ways of thinking, is competent and transmits knowledge, displaying effective skills for managing environmental demands (Bandura, 1994). The building of self-efficacy beliefs grows as the acquisition of greater accomplishments furthers the individual's confidence (Parajes, 2002).

Verbal Persuasion

When verbally persuaded, individuals are likely to mobilize their best effort and sustain the needed work to master a task (Kear, 2000). On the contrary, if individuals doubt or ruminate on their perceived deficiencies, mastery or success in tasks is difficult at best (Bandura, 1997). Verbal persuasion has the potential to move people in the right direction toward mastery, encouraging them to try hard enough with sustained effort to succeed. The effort exerted, coupled with success, is an excellent builder of self-efficacy beliefs leading to the development of an overall sustained sense of self-efficacy (Kear).

Verbal persuasion highly influences individuals' perceptions of themselves when obtained by a competent model. Pajares' (2002) research found a disconnect between belief and reality among individuals in studying self-efficacy. Talented people may suffer from self-doubt about the capabilities they possess. Others, whose talent may be lacking, may possess a great deal of confidence. Verbal persuasion by a competent model may be the missing link between self-efficacy and the confidence needed to build it. Though it is not unusual for individuals to over estimate or underestimate their gifts and talent abilities, there could very well be a large gap between perception and actual competence (Bandura, 1993). Actual knowledge and competence may be highly influenced either way

based on verbal persuasion, influence of a competent model, and the individual's susceptibility to it (Kurbanoglu, 2003).

Psychological States

Individuals may also rely on their somatic and emotional states to appraise and interpret their self-efficacy beliefs and knowledge capabilities (Bandura, 1997). Stress events and life situations create a reactionary environment in which individuals will interpret their own reactions to tension and the effectiveness of their response. These interpretations lend themselves to the psychological stability of the individual but also play an important role in the individual's self-efficacy to handle such situations competently (Kear, 2000).

Poor performance in areas where competence was needed and was not available or desired and not displayed queue individuals to later consider themselves vulnerable or incapable of responding properly. If the situation calls for physical performance, individuals may perceive themselves as unfit for the task due to injury or aches experienced during or after the activity (Bandura, 1994).

Moods also contribute to the individual's perception of self-efficacy (Kurbanoglu, 2003). Positive moods are more likely to enhance self-efficacy while negative moods diminish it. Bandura's (1997) research pointed to more than motivation, affective states, or actions: individuals tend to base their self-efficacy on what they believe more than on what is actually true. In the psychological aspect of self-efficacy, individuals' preconceived notions about what they can do and their ability to utilize this competency at a given time promotes a positive sense of self-efficacy, renewing itself over again with each response opportunity (Bandura, 1997).

Measuring General Self Efficacy

The Sherer General Self-Efficacy Scale (SGSES) uses a 5-point Likert-type scale (1) strongly disagree, (2) disagree, (3) neither agree or disagree, (4) agree, and (5) strongly agree. The sum of item scored describes general self-efficacy; the higher the score the high the level of self-efficacy. Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers (1982) developed the SGSES scale to measure “a general set of expectations that the individual carries into new situations” (p. 664). The SGSES has been the most widely used general self-efficacy (GSE) measure in clinical and personality research and in organizational settings (Iman, 2007). Chen, Gully, and Eden (2001) found internal consistency reliabilities of SGSES to be moderate to high ($\alpha = .76$ to $.89$); however, even minor modifications made to the instrument can drastically change its outcome. Due to sufficient alpha scores, the SGSES will be used in this study to determine levels of GSE. Widely used and accepted, the SGSES is a reliable and valid instrument when considering the theoretical implications of generalizing a domain component such as Bandura’s self-efficacy.

Adult Learning Theory

Self-Efficacy Concerns with Adult Learners

The individual negotiates and adopts incoming information through complex methods such as observation, conditioning, and assessment. Through these means and many more, learning takes place and self-efficacy is developed. When experiencing continuous knowledge creation, learning combines established knowledge and possibilities beyond current knowledge (Nonaka & Takeuchi, 1995).

A major function of learning is to empower. Learning gives the power to predict and control events affecting the life of the individual (Bandura, 1994). Chyung (2007) found that younger adults (20-39 years of age) were more apt to improve perceived levels of self-efficacy, in a learning environment, than older students (40-57 years of age) were. Though it is not clear as to whether age provides varying degrees of empowerment in learning or promotes a greater sense of control, it is interesting to note. Learning grows into knowledge, giving the ability to make meaning according to Bruner (1996). Meaning making plays a powerful role in the formation or improvement of self-efficacy beliefs as seen in Chyung's research.

Through meaningful interpretation of events, individuals learn about their environment and themselves through tiny collections of sensory input. Bruner identified four established modes of meaning making:

1. The establishing, shaping, and the maintaining of intersubjectivity is important for agreement of meanings or definitions in the learning process.
2. A correlation between events, language, and behavior to the actions taken is needed for consistency and dependable beliefs about consequences.
3. The construction of particulars in a normative context to assign meaning to standards, conformities, and deviations.
4. The application of rules of logic and dichotomous values for distinction of whole-part, object-attribute, and identity-otherness (p. 90).

The fifth mode of making meaning is added by Mezirow (2000) who called the individual meaning making a state of becoming critically aware of tacit knowledge assumptions and expectations for relevance in making interpretation. In learning, rules

such as these stated above can be seen as predictive and regulative, setting a framework for the individual to work from (Cranton, 2006). These rules govern individuals to make them draw upon self-efficacy beliefs, judgments, actions, assessment, and their success.

Transformative Learning

Transformative learning happens based on individuals and the conditions which surround them. Transformation is driven by intrinsic and extrinsic forces that are shaped by the social complexities in the world of the adult learner (Bruner, 1996). This type of learning is defined by Tang (1997) as the rhythmic dance of differentiating and integrating the old with the new to create the transformation of knowledge. For self-efficacy beliefs, this transformation can be pivotal in promoting greater self-efficacy and knowledge competence for the adult learner by changing pre-existing beliefs or enhancing those already in place (Bruner, 1990).

Transformation takes place in historical, developmental, and social contexts; not one isolated, epochal event (Mezirow, 2000). True transformational learning is growth in identifying one's own sense of self with the well-being of all life, thus creating a sense of social responsibility (Parks Daloz, Keen, Keen & Daloz Parks, 1996). This transformation does not occur on a continuum nor does it happen spontaneously, but over time as knowledge shifts and new dependable frames of reference emerge (Mezirow). For the adult learner, this transformative knowledge brings not only a new construct in information organization and a greater sense of self-efficacy, but a call to action, social responsibility (Parks Daloz et al.).

The identification one shares with all people and life embodies social responsibility of the adult learner and can lead to competent models who spur others onto

human accomplishment and greater achievement (Knowles, 2005). Constructive engagement on the part of learners with their community provides a special empathetic connection. In this time of connection, learners are able to unite with those different from themselves on a variety of levels within their larger community (Brookfield, 2005).

The shared unity results in what Parks Daloz, Keen, Keen and Daloz Parks (1996) call the shared “we” phenomenon. The movement from “us” and “them” represents a new opportunity to connect and engage on a level not previously known. In this process, transformative learning is then socially responsible.

Critical Reflection

Critical reflection is the primary component needed for self-directed learning emanating from within. Transformative learning is not possible without critical reflection; however, critical reflection does not always generate transformative learning (Brookfield, 2005). To formulate what Mezirow (2000) terms as more dependable beliefs, critical reflection is necessary to uncover hegemonic assumptions and accepted paradigmatic structures. The common sense often mindlessly absorbed by the learner must be called out in the critical reflection of the transformative process.

The transformative learning process holds two components to the critical reflection process:

1. Power analysis of the situation or context in which learning is happening is necessary in critical reflection to fulfill the requirement of questioning and reordering action. Social phenomena and observed reaction to it by mentors or personal heroes gives the learner a specific line of reaction. The set mode of response will alter in accordance with critical reflection, in the transformative

process, as epistemological experience changes. As critical reflection takes the epistemological experience into consideration, then so does our capacity to know and make meaning grow (Brookfield, 2005).

2. Identification of personal assumptions set to potentially destroy one's sense of well-being but serve others are hegemonic concerns in critical reflection.

Transformative learning is meant to transcend institutional structure, set group identity, and move toward a group with identities with individual reflection (Kasl & Yorks, 2002).

Brookfield (2005) calls critical reflection a focus on being explicit in analyzing previously implicit and uncritically accepted knowledge. Critical reflection then involves the investigation and critique of any intellectual community holding power to disseminate norms of discourse. Critical reflection will then serve the following purpose:

1. Externalizing and investigating relationships and the exercise of their power.
Critical reflection must be a collaborative project for common radical support with critical colleagues to generate social action.
2. The uncovering of hegemonic assumptions is necessary to create conditions for counter-hegemonic practices leading to socially responsible change. The critical reflection of transformative learning provides the dismantling of what Foucault (Flynn, 2005) referred to as the normalizing gaze (p. 92). This socially constructed phenomenon, dismantled and then rebuilt by human effort, provides the tools of critical reflection in transformative learning (Brookfield, 2005).

Adult Learning Theory

Adult learning theory, andragogy, shares very little in common with learning theories often ascribed to children (Merriam, 2001). In contrast to child learning, adult learning is more self-directed and motivated from within. Adults confront new knowledge acquisition with the vast experiential knowledge they already have (Lara, 2007).

The adult learning approach to problems, inquiry and solutions come from a standpoint considered more relevant to life and life situations. “Formulating more dependable beliefs about our experience, assessing their contexts, seeking informed agreement on their meaning and justification, and making decisions on the resulting insights are central to the adult learning process” (Mezirow, 2000, p.4).

Learning best takes place when adults can readily apply new knowledge and find its value immediate to them (Merriam, 2001). In the learning environment, application exercises would provide real value to the learning process. Adult learners asked to take new knowledge and give it a life experience would not only promote further learning but also hold the potential for positive community influence (Cranton, 2006). Tools for the promotion of transformative learning and social responsibility lay within the context of the adult learning theory.

To transform the constructs of preexisting knowledge, the adult learner must utilize the following tools:

1. Diversity must be embraced and the challenge met with a full understanding of the meaning. The shift must transfer from “us” and “them” to “we” (Parks Daloz et al., 1996).

2. With transformed learning, the task of critically reflecting upon previous assumptions about life, philosophies, and the varied schema earlier assigned to them must be undertaken (Vella, 2002).
3. Grasp the web of relationships and histories weaving together to create a shift in frames of reference and accommodation for new shared knowledge within the community. “Our life histories and language are bound up with those of others” (Mezirow, 2000, p.15).
4. New knowledge must have a proving ground to find purpose, for experimentation, and to prove value in “orders of consciousness” that are driven by intrinsic and extrinsic forces shaped by social complexity (Mezirow, 2000).

Embodied within the adult learning theory are the following presumptions: a) adults learn practically and need purpose to their learning experience, b) experimental opportunities are essential for adult understanding of new knowledge concepts, and c) learning best takes place when adults can readily apply new knowledge and find its value immediate to them (Lara, 2007).

Crystallized learning patterns mark the adult years, leading to learner perception of what is or is not practical (Merriam, Caffarella, & Baumgartner 2006). When compared to the backdrop of what is known and what can be understood, the adult learner looks to make ready use of new information if it is determined useful. Practicality and understanding in knowledge is identified as a purposeful and a worthwhile learning experience (Lara, 2007). Understandings are more dependable when they produce opinions the reader is not only familiar with but can easily incorporate into preexisting knowledge (Mezirow, 2000).

Experimental opportunities provide the much needed proving ground of new knowledge for the adult learner (Vella, 2002). When building on prior knowledge, new inputs are strung together webbing old with new to form knowledge constructs never before existing. The experimental component of understanding is more like a testing of new knowledge durability (Merriam et al., 2006).

If the new incorporation has staying power, the experiment will prove it out, lending to it a commitment on the part of the learner (Nonaka & Takeuchi, 1995). For deeper understand of these new concepts, adult learners will test and approve knowledge and its sources based on their understanding of it and conviction of its truth. According to Parks Daloz, Keen, Keen and Daloz Parks (1996), the opportunity to act on commitments, to test and ground growing convictions in action, is vital on the part of the learner.

The adult learner prescribes knowledge value to incoming information. For the adult learner, knowledge value is based on information's readiness for application. New knowledge application and incorporation into the learner's existing sense of self and life situation creates inherent knowledge value (Merriam, 2001). In earlier years, successive knowledge such as mathematics was valued less by the learner and more by those who instructed. Now in the adult years, knowledge has to be immediately beneficial and useable for the learner to negotiate his professional and educational standing as well as service to the greater community (Merriam).

Social responsibility comes from new convictions, held by the learner, to make knowledge a transformative power for communal good. The growth toward this capacity

to identify one's sense of self with the well-being of all life undergirds social responsibility (Parks Daloz et al., 1996).

Assumptions of Andragogy

Andragogy is the learning theory reserved specifically for adults (Knowles, 2005). The foundational principles of the adult learning theory presume adults learn practically and need purpose to their learning experience. Along with the practicality of knowledge, adults need experimental opportunities (Cranton, 2006). These opportunities are essential for adult understanding of new knowledge concepts. As a result, learning takes place when adults can readily apply new knowledge and find its value immediate to them (Lara, 2007).

Malcolm Knowles' (2005) research on andragogy resulted in five specific assumptions about the learning theory ascribed specifically to the adult population. Knowles called andragogy another model of assumptions to be used in addition to the long standing pedagogical model of assumptions, generally reserved for children. Knowles provides two alternative models, adult and pedagogical assumptions, for testing assumptions. The testing of assumptions allows the learner to determine the proper fit for knowledge (Jarvis, 2001). The assumptions are not to be considered dichotomous. For the adult learner, Knowles' assumptions allow both models to be taken into consideration to find the best place for learning somewhere between the two (Kerka, 1989).

The first of Knowles' (2005) assumptions relates to the concept of the adult learner. As the individual develops, the shift between dependency and self-directedness moves the individual forward and on to maturation through the life cycle (Skinner, 1953). Mentors, parents, and instructors hold a specific responsibility to facilitate and nurture

this important developmental task. In general, adult learners hold a deep psychological need to be self-directing in their learning experiences as well as those in life. It is for this reason that teachers of adult learners must understand the importance of self-directed study while also providing necessary support to the learner when the need arises (Vella, 2002).

The second of Knowles' (2005) assumptions directly follows the role of the learner's experience. The experience of life and living provides multiple scenarios and opportunities for the adult learner to organize and record a large reserve of experience. The accumulation of experience creates a rich environment for learning that extends not only to themselves both those around them who benefit from this resource (Wojciechowski & Palmer, 2005). As the individual develops throughout the life span, more meaning is attached to life experiences and less to those passively acquired or observed by watching others (Skinner, 1953). Active experience provides the best teacher for creating the rich environment from which the learner draws. For this reason, with adult learners it is important to fully understand the value of experimental design, open discussion, experiences out in the field and other opportunities to engage in problem-solving scenarios with fellow learners (Merriam et al., 2006).

A readiness to learn is Knowles' (2005) third andragogical assumption. Adults must feel a need to engage in a learning event or activity. This is especially true in formal degree programs. When adults are ready to learn, it is generally considered against the backdrop of their current life situation (Mezirow, 2000). The adult will determine if the new learning will allow for a more satisfying existence or ability to cope with life issues or problems. The instructor must take responsibility to ensure the learning environment

provides opportunity and tools to facilitate this type of instruction, as well as provide the necessary tools to assist the adult learner in discovering what it is he needs to know (Brookfield, 2005). Adult learning programs must be organized with the concept of life-application and proper developmental needs of the adult to provide education to learners and their readiness to learn (Jarvis, 2001).

The fourth and final of the Knowles (2005) assumptions of adult learning is the orientation to learning. For the learner, education is a stepping stone, a building block to pre-existing knowledge. Education is viewed as a necessary process by which learners can acquire the competence needed to achieve life's potential. Learning is application-based and a positive way to not only gain competence but collect information, allowing for a better life today and in the future (Parks Daloz et al., 1996). Due to this predisposition of application-based knowledge, the adult learning experience provided by the instructor should be organized around the individual's competency and developmental categories (Jarvis, 2001). Adult learners are application and performance centered in their specific orientation to learning.

Learning and Adult Learning Theory

In discussing adult learning theory, the research points to the clarification of learning itself. Cranton (2006) discussed not only the learning inherent in adult learning theory but also the kinds of learning often involved when educating the adult learner. Habermas (1972) developed three domains of knowledge to describe the way in which learning takes place.

1. The first of these domains is the domain of technical knowledge. In this domain, the environment is concerned with cause and effect relationships much like

experimental design. The observations in the environment are also behavioral as consequences are observed for the display for particular behaviors.

2. The second domain of knowledge is concerned with practical knowledge. The understanding of interpretations and the successful understanding of what individuals mean to communicate, social norms, mores, values, political persuasions, as well as sense-making and being understood ourselves are all within this domain.
3. The third domain involves emancipatory knowledge. This type of knowledge domain is acquired through the process of critical self-reflection.

Critical self-reflection is an integral component of Mezirow's (2000) transformative learning as well as the constructivist paradigm. Mezirow has developed two specific domains beyond those of Habermas (1972), instrumental and communicative. Originally espoused by Habermas, the emancipatory domain identifies self-knowledge. The combination of critical reflection and self-knowledge leads to perspective transformation. Mezirow redefines this domain as the transformation process in both instrumental and communicative domains.

Cranton (2006) holds three perspectives of adult learning theory intended to provide for the facilitation of learning as it pertains to this particular population.

1. The first of the three domains is subject-oriented learning. The goal of subject-oriented learning is to obtain content. Specific content such as organized facts, technical skills, practical skills, and problem solving strategies are a part of the learning orientation. With its positivistic nature, subject-oriented learning

- successfully meets learner expectations. In this orientation, the instructor, mentor, or expert makes the instructional decisions and the learner is subject to them.
2. The second perspective is consumer-oriented learning. This orientation occurs when the individual communicates the need to learn and seeks a mentor to fulfill the need. Once the mentor is secured, the learner will continue to learn under the guidance and direction of the chosen mentor. In this orientation, the learner holds the power to make the learning decision; it is, therefore, considered a constructivist approach.
 3. The third and final perspective is emancipatory learning. In this orientation, learning is a process of freeing the individual from those things placing limitations on options placing unnecessary control over the individual's life. Many times these very forces have been previously seen as out of or beyond the individual's realm of control. For this reason, this orientation is constructivist in nature and lends itself to be transformative in practice. There are situations when the learning happens separately from the mentor but can also be fostered as well. This final orientation of Cranton's (2006) adult learning perspectives differs from the former two due to the nature of emancipatory learning and its tendency to be a difficult, time consuming, and a generally painful process.

Coombs' (1985) research developed a three-part framework for particular types of learning conducive to particular settings. The proposed settings are as follows:

1. Formal education: organized and structured with value in the educational system as determined by the system as well as awarded degree, certificate or diploma.

2. Non-formal education: learning may be socially organized or structured like formal education but no award or educational currency is exchanged for completion.
3. Informal education: wholly self-directed and is garnered from everyday experiences and acquired knowledge over a length of time.

According to Merriam et al. (2006), all three parts of Coombs' framework share a common thread, linking one another to a common purpose. The purpose for all three is rooted in the desire to focus on social action and change for the betterment of the community, culture, and the individual. Learning can be connected to oral tradition, indigenous arts, or the gathering of citizens for a particular cause. It is the common thread of positive change binding them all to result in learning.

Motivation and Learning for the Adult Learner

Houle (1961) pioneered the classification of the adult learner. His work provides a framework for understanding what types of information adults seek to learn and what reasons they have for doing so. Houle's classification separated learners into categories: (a) goal oriented learners, learners use education and a means to achieve a goal; (b) activity oriented learners, learners who participate for the sake of the designated activity, and for the social opportunities provided by the activity; and (c) learning oriented learners, learners who look for knowledge and seek to obtain it for the sake of doing so. These classifications can also be seen as characteristics serving to motivate the learner for a myriad of reasons ranging from social, professional, or simply cognitive (Merriam et al., 2006).

In Johnstone and Rivera's (1965) landmark research, they revealed barriers to education showing why the adult learner did not participate in the educational process. These internal and situational barriers are dependent on the learners' particular situation or the environment they find themselves. They are not conducive to the pursuit of education by the learners and can be seen as deterrents to educational pursuit (Kerka, 1989). Johnstone and Rivera found that internal barriers are determined by the learner's attitude about themselves, the learning process, or possibly the learning environment. Situational barriers pertain to the broadly limited access of educational opportunities for the adult learner.

Merriam and Brockett's (1997) definitive research revealed four major conditions adults found to limit their educational motivation and access. The four conditions are as follows:

1. Geographic conditions to include urban, suburban, and rural areas of cities and towns. Depending on the city, the educational access could be heavily influenced by the location of the learner's home or even lack of one.
2. Demographic conditions such as age and gender influence levels of participation and motivation to do so. Younger learners participate more often, middle-age second, with older adults coming in last. Older adults generally have less education and research shows current educational levels are good predictors of return learners to education.
3. Socioeconomic conditions and education seem to be connected and constant. Individuals from upper-middle class backgrounds have a tendency to remain stable, increasing their continued participation in educational endeavors.

Individuals from lower social class families tend to participate less due to money or feelings of alienation from educational programs as a result of the social class. Cost is another issue separating the adult learner from educational opportunity, particularly if the learner is from a lower social class. Formal education costs money, requires prerequisites, and holds particular norms for entrance and completion.

4. Cultural determinants affect many societies and cultures with respect to education, education limits, and learner access. Majority groups tend to participate more often, possibly due to prohibiting minority people or the impact of being in the minority groups and the attitude toward education shared by the group. Members of majority groups may intimidate minority groups. This intimidation may foster a lack of trust necessary to engage in the educational process.

According to Knowles' (2005) research, adult learners are motivated to learn best when they are in dialogue and relation with the instructor. This is a very important aspect to adult education and may serve to also draw those who may otherwise limit their educational experiences. If adult learning is best done in dialogue, Vella's (2002) twelve principles and practices serve Knowles' assumption well. Vella's twelve principles of effective adult learning provide a means by which to begin, maintain, and nurture dialogue in the educational setting. They are as follows:

1. Needs assessment, where the learner participates in the naming of what will be learned.

2. Safety in the environment facilitates the process of interaction between teacher and learner, fostering learning and development.
 3. A sound relationship between teacher and learner and among other learners promotes effective learning.
 4. Attention to the sequence of content and reinforcement in the learning process are effective for the adult learner.
 5. Praxis, ensuring action and reflection are part of the learning process, or learning by doing.
 6. Respect for learners and their decisions about their own learning.
 7. Cognitive, affective, and psychomotor aspects of learning are to be considered.
 8. Immediacy of the learning for the adult should be understood.
 9. Structured roles and role development need to be explored.
 10. Teamwork and an understanding of how small groups will be utilized.
 11. Engagement of learners in what they are learning.
 12. Accountability, asking the question of how the learner knows they know
- (Vella, pp. 32-35).

Distance Education and Online Learning

Definition and History of Distance Education

The Commission on Colleges Southern Association of Colleges and Schools (2006) developed the following definition for distance education:

Distance education is defined, for the purposes of accreditation review, as a formal educational process in which the majority of the instruction occurs when

student and instructor are not in the same place. Instruction may be synchronous or asynchronous. Distance education may employ correspondence study, or audio, video, or computer technologies (p. 1).

Moore and Kearsley (2005) proposed the following definition in his book, *Distance education: A systems view*: “A distance education system consists of all the component processes that operate when teaching and learning occurs at a distance occurs. It includes learning, teaching, communication, design and management” (p.9).

The definition of distance education encompasses far more than either of the above quotes could possibly explain. Formal definitions and intuitional policy are a necessary component of formalized distance education (Mullen & Runnels, 2006). However, the concept and practice of distance education has become a rich and rewarding endeavor for both teacher and learner, leaving much of its true definition in the eyes of the participants (Keegan, 2003).

In a historical context, the main definition of distance education was put forward as a synthesis of multiple definitions dating back to 1980, with names such as correspondence and home study tracked back to the early 1900s with the first catalog of instructional films (Resier, 2002). Thomas Edison made the following statement on the invention of film, "Our school system will be completely changed in the next ten years" (Saettler, 1968). Though this change did not occur within the time frame proposed by Edison, the change did come, but after the start of World War II. During the Great War the introduction of television as a medium slowed in mainstream society, but for military training efforts it had demonstrated great potential for use as a teaching tool (Wright, 1991).

With the success of the audio-visual format gaining momentum after World War II, intensive research programs were put in place and directed at understanding and developing theory on how instructional media impact classroom learning (Resier, 2002). By 1948, five educational institutions in the United States of America were directly involved with television. Iowa State University was the first of such institutions to be on the air. The 1950s bought 17 programs using television as instructional material to the classroom with the National Educational Television Network (NET) (Hull, 1962). Though instructional television did not live up to the potential Edison first claimed it could, television as instructional medium took root in the minds of educators.

Childs (1963) researched television instruction and correspondence study. He found television lacking as an instructional method; however, he did conclude that television was an effective instrument for instruction. In 1957, the Correspondence Study Division of the National University Extension Association (NUEA) followed with a study to support correspondence instruction with the use of television and measure its effectiveness as an educational tool. No significant difference in the achievement level of students taught in traditional classrooms via television or with combination of correspondence study and television was observed (Almeda, 1988). With the boom of educational television (ETV) stations in the 1960s and the microwave technology of the 1970s, universities began to set up microwave networks to profit from the Instructional Television Fixed Service (ITFS) authorized by the Federal Communications Commission (Jefferies, 2009).

Systems utilizing ITFS technology were able to reach regional campuses and other universities, though it reached only sites linked to the system. (Wood & Wylie,

1977). Students experienced the learning through television and were considered a part of the extended classroom. In the 1980s, new technology quickly surpassed television and a new era in distance education began. Students moved from the traditional face-to-face classroom to the Internet based classroom. With Internet and computer access easier than ever, distance education quickly moved from the home study of the early 20th century to the high-speed Internet-based classrooms of today. Thomas Edison's prediction of the future of distance education was indeed accurate, though more than 10 years was needed for it to be realized.

The history and early studies of distance education are significant to the definition of distance education in the 21st century. In moving toward a definition of synthesis, six basic defining elements were proposed by Keegan (2003) and are as follows:

1. The separation of teacher and learner, distinguishing it from face to face learning.
2. The influence of an educational organization which distinguishes it from private study.
3. The use of technical media, usually print, to unite teacher and learner and carry out educational content.
4. The provision of two-way communication so the student may benefit from or initiate dialogue.
5. The possibility of occasional meetings for both didactic and socialization purposes.

6. The participation in an industrialized form of education which, if accepted, contains the genius of radical separation of distance education from other forms within the educational spectrum (p. 44).

The original publication of these defining elements by Keegan (2003) was groundbreaking for the shaping of distance education and how we approach it. Extensive citation and further research spun from these key defining elements, transforming distance education into to what it is known as today. With the passing of time and integration of definitions, the most fundamental characteristic of distance learning has been identified as separation of teacher and learner (Moore & Kearsley, 2005). It is this feature which most distinguishes distance education from all other conventional sources of education. The term distance education is inclusive, holding two other terms close at hand to fully complete the definition, distance teaching and distance learning (Keegan). Distance teaching is associated with the course development subsystem of the program where distance learning is the student support subsystem. These two subsystems work together to complete the definition of distance education according to Keegan.

Theories of Distance Education

Historical researchers such as Baath (1979) and his two-way communication, as well as Holmberg's (1983) work on guided didactic conversation, were front runners in the development of theory as it pertains to distance education. These components are a crucial part of the distance learning experience today and can be found in historical as well as modern day theories used to disseminate education by means other than traditional classrooms.

Three main theory groups have developed since Holmberg (1983) first wrote on the methods of teaching correspondence in 1960. The three groups have divided as follows: (a) theories of autonomy and independence, (b) theory of industrialization, and (c) theories of interaction and communication. For this literature review, the third main theory group will be discussed, as it most directly pertains to the research area of this dissertation.

Interaction and communication are the central focus to any distance education program. John A. Baath, a Swedish philosopher, brought the concept of two-way communication to the distance education forefront in the 1970s. Though he never claimed to be the originator of the concept, his empirical and theoretical contributions to the topic established it as a major defining feature of what we know as distance education today (Keegan, 2003). The goal of his research was to relate known modern research to research of distance education. Baath (1983) studied teaching models from theorists such as Bruner and Skinner, bringing to light the function of two-way communication within these teaching models.

Bruner (1966, 1973, 1986, 1990, 1996) developed a major theme in the theoretical framework of learning. He identified learning as an active process in which learners construct new ideas or concepts based upon their current and past knowledge. According to Bruner, learners select and transform information, construct hypotheses, and make decisions. All functions of learning take place while learners rely on cognitive structures already have in place. These cognitive structures, schema and mental models, have the ability to offer meaning and organization to experiences. Bruner's (1973) mental

framework allows the individual to go beyond schema and mental models to embrace new cognitive structures, creating new possibilities in learning.

Where instruction is concerned, the educator should facilitate and encourage the learner to discover principles by themselves, fostering a growth of the mental models already in place (Markle, 1969). Active dialog, known as the Socratic Method, is central to the task of discovering these principles (Holmberg, 1983). While the student is engaging in discovery, the instructor should act as a translator of knowledge, breaking the information down as appropriate for the learner so absorption into pre-existing mental models will take place. Development of curriculum should be organized with this in mind. The knowledge spiral seen in Nonaka and Takeuchi's (1995) research applies here as Bruner (1986) proposes the student must continually build upon what has already been learned.

According to Bruner (1966), a theory of instruction should address four major areas: (a) inclination towards learning, (b) knowledge structured for ease of understanding by the learner, (c) determination of best approach and sequences in which to present material for learner grasp, and (d) the nature and pacing of rewards and punishments (p. 40-41). When methods for structuring knowledge are in place, the result will be simplification, new knowledge generation, and an increase ability to manipulate information. Bruner's (1986, 1990, 1996) later work expanded his theoretical framework to incorporate social and cultural aspects of learning as well as legal aspects.

As a constructivist theory, Bruner's framework for instruction is based primarily upon the study of cognition. His theory can be linked to the area of child development and his research can be correlated with those such as Piaget (Bruner, 1960). Bruner's

(1973) ideas toward instruction actually emerged from his study of math and science programs for young children. The principles developed from his early framework eventually emerged into the theory of instruction known today. Bruner's theory of instruction holds three foundational principles: (a) Instruction must be concerned with the experiences and contexts in order to make learners willing and ready to learn, (b) Instruction must be structured for ease of grasp by learners contributing to the spiral of knowledge effect, and (c) Instruction should be designed to be broken down and or to fill in the gaps to complete knowledge (Bruner, 1966, 1973, 1986, 1990, 1990).

The foundation of B.F. Skinner's (1950, 1953, 1954, 1957, 1968, 1971) theory of operant conditioning holds learning as a function of change in overt behavior. These changes in behavior are the direct result to an individual's response to stimulus events found in the environment. When the individual operates on the environment, a response is produced and a consequence presented. The consequence could be making a ball fly through the air or achieving the solution to a math problem. When a particular stimulus-response (S-R) pattern is reinforced (rewarded), the individual is conditioned to respond. The distinctive characteristic of Skinner's operant conditioning differs from previous works such as Thorndike's Law of Effect (1932) in the role of the organism. For Skinner, the organism can produce a response instead of only drawing out a response due to an external stimulus.

The key element of the S-R component of Skinner's operant conditioning theory is reinforcement. According to Skinner (1953), the definition of a reinforcer is anything strengthening a desired response, from verbal praise, emotional well-being, or positive self-efficacy beliefs resulting from accomplishment or self-satisfaction. The opposite of

positive reinforcement is also considered, negative reinforcement. Skinner defines negative reinforcement as the result of any stimulus event resulting in the increased frequency of a response when it is withdrawn. Negative reinforcement is not to be confused with punishment, which serves to weaken behavior.

With these features in mind, Skinner's theory is distinctive in its attempts to provide behavioral explanations for a broad range of cognitive phenomena.

Skinner (1950) made attempts to explain human phenomena such as drive (motivation) and its connection with deprivation and reinforcement schedules. Skinner (1957) also studied verbal learning and language within the operant conditioning paradigm, although this effort was strongly rejected by linguists and psycholinguists. Skinner (1971) incorporated free will and social control into his theoretical study moving to a moral ground beyond the basics of human behavior and conditioning.

Operant conditioning has been widely applied in clinical settings for purposes of behavior modification, classroom management and instructional development, though Skinner himself rejected the idea of theories of learning very early on in his career (1950). According to Markle (1969), the following provides an example of the implications of reinforcement theory as applied to the development of programmed instruction: (a) Practice should take the form of question (stimulus) and answer (response) frames; (b) Require the learner make a response for every frame and receive immediate feedback; (c) Arrange the difficulty of the questions so the response is always correct and hence a positive reinforcement; and (d) Ensure good performance in the lesson is paired with secondary reinforcers such as verbal praise, prizes, and good grades (p. 128).

Skinner (1953, 1968) gave three principles for his operant conditioning theory to follow: (a) Behavior positively reinforced will reoccur and intermittent reinforcement is highly effective; (b) Information should be presented in small amounts so responses can be reinforced, thus shaping can occur; and (c) Reinforcements will generalize across similar stimuli ("stimulus generalization") producing secondary conditioning (p. 158).

Student Satisfaction in Online Learning

Factors Contributing to Student Satisfaction

Student satisfaction outcomes in the field of distance education is a commodity highly sought after by faculty and institutions (Strachota, 2003). The distance education platform holds a very specific set of challenges to instructors and students; leading institutions work to not only define the challenges, but also meet them for optimal advantage to all parties involved (Kemp, 2002). Communication seems to be a prevailing challenge present in the literature leading instructors and institutions alike to stop and take notice (Laffy et al., 2006). Because the distance learner may never have a physical campus presence, there may be a difficulty in establishing relationships with faculty and fellow students (Mullen & Runnels, 2006).

The development of the personal computer, Internet and other various technologies have allowed a much broader and diverse population to participate in postsecondary education, creating a new category of learner who may never step foot on a physical campus (Laffy et al., 2006). The learner who prefers distance education is different from the traditional on-campus student. They possess particular characteristics not found in traditional student populations (Halsne & Gatta, 2002). The challenges with the course platform, technology needs, communication, and interaction must be taken

into account when looking at student satisfaction and retention in distance learning programs (Bean, 2003).

Student satisfaction can be defined as the students' perception about their college experience, the value of the experience, and the level of motivation the experience spurs in students to continue (Chute, Thompson, & Hancock, 1999). Moore and Kearsley (2005) pointed out satisfaction in students may not correlate with actual student achievement. When student satisfaction is reported, however, this presents a motivating factor, and motivation is often a predictor of student future success. Moore and Kearsley's framework gives way to continued research concerning the levels of satisfaction perceived by students in the online education programs filling our institutions nationwide.

The continued increase of online courses offered at institutions of higher education and their ever increasing student enrollment should give educators and administrators cause for investigating not only student satisfaction but also student achievement (Kemp, 2002). Understanding course satisfaction may provide a way to determine the future success of students in the online environment. Moore and Kearsley (2005) report no direct correlation between course satisfaction and student achievement; however, the study invites new possibilities of exploration into self-efficacy and course satisfaction. According to Bandura (1986), self-efficacy is outcome specific to the individual alone. According to current research, course satisfaction may not lead to student achievement. However, further study is needed to examine levels of self-efficacy and their potential to predict course satisfaction.

Advantages of Online Education for the Student.

Online education courses are often self-paced and provide flexibility for the demanding needs of the adult learner. Technology and asynchronous communication give learners access to content, instructors, or even fellow classmates anytime their schedule allows (Belanger & Jordan, 2000). These features provide the desired convenience most learners are seeking when entering into a distance education program. The online platform allows greater time for the learner to critically reflect and develop responses in chat rooms or threaded discussion boards compared to learners in a classroom based course (Moore & Kearsley, 2005). Time to reflect and formulate a desired response is particularly helpful to students who may otherwise be reluctant to speak in the classroom with others present.

Bouhnik and Marcus (2006) found four advantages to distance learning for the adult. Freedom to decide when each lesson will be learned allows adults to fit learning around their busy schedule. A lack of dependence on the time constraints of the lecturer gives the adult flexibility to engage in other demanding commitments alongside their educational pursuits. Freedom to express thought and ask question without limitations provides the use of current knowledge while exploring other knowledge possibilities (Nonaka & Takeuchi, 1995). The accessibility to the course's online materials at the student's own election maintains the freedoms adult have come to value and require based on the demands of their lives (Thorndike, 1932). Together, these advantages are worth consideration for the sake of the adult learner and success of distance education (Cranton, 2006).

Students with limited access to higher educational opportunities may live in rural areas or have handicaps or disabilities restricting their access to a campus benefit from

distance education (O'Brien & Renner, 2002). To appeal to a larger student base, institutions have utilized current online technologies to provide courses to those students who would not otherwise be served. Unfortunately, the online learning experience has not been a satisfying experience for a large portion of participating students (Herbert, 2006).

According to the research by Herbert on student satisfaction and retention, a key issue for postsecondary institutions is to identify the ways student satisfaction. Student satisfaction can always be improved thus leading to greater retention (Bean, 2003). Reaching students with technology and flexibility, though seen as positive, are facets of a larger mix of features. These features are dependent upon the instructor and the institution. Both parties must address technology and flexibility appropriately to ensure students not only complete their course work but also return to take courses afterward (Herbert, 2006).

Bean's (2003) model of student retention suggesting a causal relationship between organizational determinants and student satisfaction. This relationship ultimately led to commitment or withdrawal. Brown and Kayser's (1982) research on interaction between students and the institution provided useful information about the institutional environment. They determined that not only did the interaction between student and institutional environment play a key role in satisfaction but the relationship also served the students' psychological need for reinforcement when performing well (Brown & Kayser, 1982). Kerka (1989) stated, "Participation and persistence result from the interaction of a variety of student characteristics, circumstances, and the educational environment" (p. 1). Kerka's work suggests there are student variables, whose measurement can predict to what degree a student will be satisfied and complete an

online course. Research has shown organizational determinants, institutional environment, demographic and circumstantial variables to be significant in student satisfaction and retention. It is up to the university to tap into those variables to better serve students and keep them coming back for more. (Kemp, 2002; Parker, 1999; Wojciechowski & Palmer, 2005).

Capper's (2001) study revealed the following advantages to distance learning programs at institutions of higher education:

1. Any time: A participant can access the program.
2. Any place: The participants may study from home, office or local library, but no one defined classroom is used.
3. Asynchronous interaction: Interactions can be more succinct and discussions stay on-track in the online environment.
4. Group collaboration: Electronic messaging creates new opportunities for groups to work together by creating shared electronic conversations and discussion.
5. New educational approaches: New options and learning strategies become economically feasible through online courses (p.2).

Car (2000), Chute, Thompson and Hancock (1999), and DeBourgh (1999) found that student satisfaction rests in many of these advantages. The satisfaction of a student can also be directly tied to clarity of course design, interaction with instructors, and active discussion within the context of the course (Swan, 2001).

Instructor and Communication

Mullen and Runnels (2006) found that student satisfaction with the course instructor was a strong predictor of overall student satisfaction in online learning. The

distance education instructor is a primary predictor in student course satisfaction showing a high correlation with the performance of the instructor and overall course satisfaction (DeBourgh, 1999). The area most noted for student satisfaction was the instructor's responsiveness and involvement with the students themselves. Instructor availability in the measurement of time as well as receptivity to the students' needs both hold great value in satisfaction determination (Moore & Kearsley, 2005).

In Herbert's (2006) study on student satisfaction and retention, students' most highly ranked variable was faculty responsiveness to student needs, with a mean score of 6.62 out of a possible 7. While there is limited information available on overall national trends with this exact variable, research shows even when a course is designed as distance learning, students place a premium on the responsiveness of course faculty (Carr, 2000; Frankola, 2001). The Herbert findings support research indicating regardless of the course delivery system, students have a certain level of expectation in the area of faculty interaction and support.

A lack of feeling connected to faculty has been shown in past research to be a significant variable in the student's sense of potential for completion (O'Brien & Renner, 2002). Yang et al. (2006) found a significant relationship between perceived social presence of the instructor and motivational self-efficacy in the online environment. The study shows that students who hold higher motivational self-efficacy beliefs perceived higher levels of instructor presence in the course. These students feel a connectedness with the instructor, potentially leading to not only course completion but also greater learner satisfaction.

Instructor feedback on assignments keeps the learner involved and motivated to continue and see the course out to its completion (Smith & Dillon, 1999). Frustration may set in with learners if the instructor does not attend to problems, concerns or general inquiries in a timely manner. Poor responsiveness on the part of the instructor may diminish overall student satisfaction with the course (Hara & Kling, 2000). According to Liaw, Huang, and Chen (2007), when learners increase their interaction with instructors, they raise their chances of building their own knowledge, as much of learning takes place in the social context, and mutual construction of understanding occurs.

Moore and Kearsley (2005) and Strachota (2006) mentioned three important types of interaction in distance learning courses: (a) learner-content, (b) learner-instructor, and (c) learner-learner (p. 1). All hold significant importance to the environmental characteristics, environmental satisfaction, learning activities, and learner characteristics set forth by Liaw et al. (2007). Instructors should consider these types of interactions when developing their distance learning courses. Because of the physical separation and unique features of the distance education experience, learners may feel isolated or possibly frustrated if the communication and interaction between the instructor and fellow learners is disconnected (Bouhnik & Marcus, 2006). Having social connectedness is important and represents social ties among people in the online environment; students will value the perceived connectedness and feel a part of the class (Laffy et al., 2006; Resnick, 2002).

Mullen et al. (2006) found teachers who support their students academically were perceived as caring. Academic support provides clearly reported course goals and objectives to students so they know what is expected and the course is relatively surprise

free. Self-regulation and active learning does play a role in this design of the online classroom. It can be difficult for the instructor because the literature shows most students have not moved to self-regulated learning or active learning as a preferred method and expect the teacher in the online environment to act much like those in the classroom environment (Hativa & Birenbaum, 2000; Young, 2003). Students should have opportunities to become self-directed learners and structure their own learning experiences with an awareness of the online design made accessible by the instructor for their use, making the student a partner in the teaching and learning (Schifter, 2001).

Technology Needs

The incredible growth rate of households in the United States with personal computers and internet access has greatly contributed to the ability of countless learners to access higher education courses online (Herbert, 2006). According to the United States Census Bureau, the increase in the number of households with personal computers rose from 8.2% in 1984 to 56.3% in September of 2001 (U.S. Census Bureau, 2001). According to their 2004 report, the Census Bureau found the proportion of U.S. households with broadband Internet connections had more than doubled from 9.1 percent in September 2001 to 19.9 percent in October 2003. With webinars and video teleconferencing, students in distance programs have greater access to experts in the field of education now more than ever before (Belanger & Jordan, 2000; Hara & Kling, 2000).

Access to reliable technology is necessary for the distance learner and instructor. Reliable equipment, open accessibility, and good condition of equipment are the necessary conduit by which online learning takes place (Belanger & Jordan, 2000). Internet access is by far the most pressing need for the distance learner and second only

to the instructor in determining student satisfaction (Bower & Kamata, 2000). When online learners experience frustration over technology and equipment, their perceived course satisfaction also lowers (Hara & Kling, 2000).

Evaluating Student Satisfaction

Between 1995 and 1998 the number of institutions offering online courses essentially tripled, and in the academic year 1999-2000 alone the number of students who took at least one online course increased by 57 % (National Center for Education Statistics, 2002). According to a report released by Sloan-C (2008), over 3.9 million students were taking at least one online course during the fall 2007. This marks a 12 % increase over the number reported the previous year. At 12.9 %, the growth rate for online enrollments well exceeds the 1.2 % growth of the overall higher education student population (Sloan-C). With this growth, the need to understand student satisfaction with online course delivery increased.

Surveys, especially in the online environment, can provide both valid and reliable data and are excellent tools for instructional use (Fink, 2006). *The Strachota Student Satisfaction Survey* (2003) instrument was developed for use in the educational setting to measure student satisfaction as an online program evaluation outcome. The instrument was found to be reliable as determined by a pilot study and the Cronbach's alpha, the internal consistency or reliability coefficient for an instrument requiring only one administration (Fink, 2006; Strachota, 2006). All five constructs for the survey (a) learner-content, (b) learner-instructor, (c) learner-learner, (d) learner-technology interaction, and (e) general satisfaction were all measured for individual reliability coefficients (Strachota, p. 2). The instrument pilot study resulted in a Cronbach's alpha of

.90 for the constructs of both learner-content and general satisfaction (Strachota). The constructs of learner-instructor interaction and learner-learner interaction resulted in a Cronbach's alpha of .89. Strachota's learner-technology construct was directly adopted from a previous pilot study by Cassidy and Eachus (2000), showing a .97 reliability coefficient.

The rigor of Strachota's (2003) instrument is an example of a reliable and valid question-based survey used to measure student satisfaction. Given the nature of the online environment and platform of distance education, question-based surveys are conducive to online data collection. With the importance of measuring student satisfaction in distance education taking a high priority in the university setting, the survey remains a valuable tool with proven reliability and validity for statistical purposes.

While conducting comprehensive surveys provides the opportunity to collect a wide range of data on a broad scope of topics, there is often the need to gather information on a few important key variables (Symons, 2000). From Symons' research on using surveys for institutional feedback and planning, measuring student perception was seen as one way to identify those key variables from the student's perspective. Extensive surveys may highlight the need for further investigation in particular areas, whereas a short survey targets key areas the researcher wants to know about without going through the process of fleshing out unwanted data.

In a study of successful completers, Symons reported about one-third of respondents believed the library resources were not applicable to them. In light of this, Symons decided to pare down the questions and conducted a short survey about library resources and facilities. The questions about library services became more succinct

allowing respondents to better understand library services offered. The shortened survey also assisted staff in potentially making the library more attractive and accessible to students. When writing surveys for student satisfaction, it is important to remember comprehensive surveys, though they collect a broad range of data, can become laborious to students, especially if they believe the questions do not apply to them. Short surveys do not collect as much information but can allow for data collection on a few key variables.

Student Satisfaction and Retention

Measuring student satisfaction is beneficial for students, instructors, and institutions to provide better courses and improved educational experiences. When students are satisfied with their online course experience, the likelihood of their completing the course and returning to enroll in a subsequent course greatly improves (O'Brien & Renner, 2002). Online student retention has been suggested as one of the greatest weaknesses in online education (Carr, 2000; O'Brien, 2002) and may be directly linked to poor course satisfaction. The literature indicates the combined failed retention rate for online and traditional classrooms ranges from 20 to 50%. The failed retention rate of online courses alone is estimated at 10 to 20% higher than traditional classroom environments (Diaz, 2002; Frankola, 2001).

According to O'Brien and Renner (2002), the number of college students participating in online courses continues to increase despite the greater likelihood of failed retention whether due to poor student satisfaction or other factors. More research is needed to understand factors that contribute to satisfaction and retention in the online environment. Demographic and institutional variables play a significant role in student

satisfaction and retention (Kemp, 2002; Parker, 1999; Wojciechowski & Palmer, 2005), however, predictive variables need to be explored. Research has shown that students who are more satisfied with their institutions are more likely to graduate (Scalese, 1999; Carr, 2000). For this study, establishing a relationship between general self-efficacy and course satisfaction may hold implications for future study on student retention.

Summary

The relationship between self-efficacy and performance is inherent in Social Cognitive Theory as espoused by Bandura. The importance of student satisfaction in distance learning programs has been shown in studies by DeBourgh (1999), Moore and Kearsley (2005), and Herbet (2006). Bandura (1986) pointed to individuals' self-efficacy as a main determinate in the outcome of any behavior they decide to engage in, applying as well to the distance education environment. If individuals are confident in their abilities to perform a specific task, the likelihood of said task being completed with success will continue to grow with each attempt.

A student's self-efficacy provides a confidence indicator and when exercised with the greater environment, its effects on performance and beliefs lead to a better understanding of achievement (Johnson et al., 2008). Academic success and failure have been widely studied within the construct of self-efficacy (Bates & Khasawneh, 2007). Self-efficacy is a recurrent theme when the individual, learning, and achievement motivation are discussed (Merriam et al., 2006). A strong connection exists for the student between achievement motivation and the role of self-efficacy beliefs when it comes to academic choices, learning, and academic performance (Bandura, 1997; Johnson et al., 2008).

The concept of learning and its theories provide a framework by which to approach the topic of adult learning. This framework may lead to a better understanding of the concept of self-efficacy within the adult population. A learning style exclusive to the adult learner is transformative learning (Mezirow, 2000). Transformative learning is individualistic and dependent on the conditions in which the learning takes place. For the adult, intrinsic and extrinsic forces drive transformative learning. These driving forces are shaped by the social complexity in the world of the adult learner.

Transformative learning, as defined by Tang and Joiner (1997), is a fundamental pattern of differentiating and integrating the old with the new to create the transformation of knowledge (p. 63). For adults, this transformation can be a key element in promoting greater self-efficacy and knowledge competence by changing pre-existing beliefs or enhancing those already in place. Transformation happens in historical, developmental, and social contexts with no one isolated event bringing it about. When transformational learning happens, individuals grow. With growth, an identifying sense of self comes and with it, the well-being of all life (Parks Daloz, Keen, Keen & Daloz Parks, 1996).

For the adult learner, this transformative knowledge brings a new construct in information organization and a greater sense of self-efficacy. Critical reflection is the primary component needed for self-directed learning (Cranton, 2006). Emanating from within, critical reflection provides not only a new knowledge base from which to draw upon but an increase in self-efficacy.

Adult learning theory holds little common ground with traditional learning theories often ascribed to children. Adult learners are more self-directed and motivated from within, confronting new knowledge acquisition with the vast experiential

knowledge they already possess. From the adult learning approach, inquiry and solutions should be relevant to life and life situations (Knowles, 2005).

The work of Malcolm Knowles (2005) on andragogy resulted in five specific assumptions about the learning theory ascribed specifically to the adult population. Knowles' work on the adult learner examines principles and critical elements of learning specifically known for the adult learner in comparison to traditional models reserved for children. For the adult learner, Knowles' assumptions allow both models to be taken into consideration to find the best place for learning somewhere between the two. According to Knowles' (2005) research, adult learners are motivated to learn best when they are in dialogue and relation with the instructor, which further adds to the understanding of specific adult needs in the educational setting.

The adult learning theory holds three basic presumptions: (a) adults learn practically and need purpose to their learning experience, (b) experimental opportunities are essential for adult understanding of new knowledge concepts, and (c) learning best takes place when adult can readily apply new knowledge and find its value immediate to them (Lara, 2007).

The practicality of the adult's orientation to learning places a premium on knowledge value. The adult learner will determine knowledge worth based on its readiness for application. Adult learners value new knowledge application and incorporation into the learner's existing sense of self and life situations are the main factors placing a value on knowledge (Bruner, 1960). In earlier years, successive knowledge such as mathematics was valued less by the learner and more by those who

instructed. Now in the adult years, knowledge seen as immediately beneficial to the adult holds very high value (Bruner, 1973).

Distance education is a type of learning environment characterized by distance teaching and distance learning (Keegan, 2005). History, growth, and developed theories of distance education provide a foundational understanding of the need for interaction and communication in the online environment.

Student satisfaction is a highly valued commodity in all institutions of higher education. Advantages to the student who engages in distance education have been identified and in part may explain why over 20 % of all U.S. higher education students were taking one or more online course in the fall of 2007 (Sloan-C).

The literature review provides a knowledge base to approach the proposed topic with informed theory and research. In consideration of the presented research and the hypothesis, this study will examine a possible correlation between student satisfaction and self-efficacy beliefs. De Bourgh's (1999) study named the distance education instructor is a primary predictor in course satisfaction while Moore and Kearsely (2005) maintain that course satisfaction does not always lead to student achievement. Herbert (2006) supports a correlation between student satisfaction and instructor interaction with communication based on identified student needs in the online environment. These studies provide a strong basis for further study of course satisfaction. What remains unknown is if a student's general self-efficacy beliefs could be a determining factor for course satisfaction, the question this study seeks to understand.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

Research linking general self-efficacy and course satisfaction is inadequate (Vekiri & Chronaki 2008); however, existing research points to many variables explaining and predicting student satisfaction in distance education. Studies have examined student satisfaction and retention (Herbert, 2006), self-efficacy, age, and gender (Chyung, 2007), and the relationship between academic motivation and social ability in online courses (Yang et al., 2006), to name a few. The relationship between general self-efficacy and its role in course satisfaction has yet to be explored. This chapter outlines the procedures utilized by this study to determine the role of general self-efficacy and the degree of relationship to course satisfaction in the online environment. A summary of the information presented under population and sample, data collection, and data analysis will conclude this chapter.

Problem and Purpose Overview

Researchers have examined student satisfaction outcomes in distance education to find variables specific to the needs of the online student. Online student retention is a concern and has been called one of the greatest weaknesses of online education (Carr, 2000; O'Brien, 2002). Studies have shown the failed retention rate for online undergraduate students ranges from 20% to 50% (Frankola, 2002).

A significant indicator of student persistence in an online course is satisfaction, both in the current course and those taken previously. Little is known about the

contribution of general self-efficacy as it relates to course satisfaction in the online environment. Using the Herbert (2006) study on student retention and satisfaction in the online environment as a model, self-efficacy and course satisfaction will be the variables measured in this study.

Research Questions

This study sought to address the current lack of research available in the area of course satisfaction and general self-efficacy through these questions.

1. What are the levels of general self-efficacy?
2. What are the levels of course satisfaction?
3. Is there a correlation between general self-efficacy and course satisfaction?

Research Hypothesis

Online students will rate general self-efficacy relative to their level of course satisfaction. A correlation between general self-efficacy and course satisfaction levels will determine if levels of general self-efficacy predict levels of course satisfaction.

Population and Sample

Respondents

In this study, 61 respondents completed the survey out of 142 potential respondents for a response rate of 43%. 40.9% of respondents were undergraduate and 59% were graduate students from five online courses. All courses were offered in the distance education program at a medium-size, mid-western university during the 2009-2010 academic year. The respondents in the sample were 25 years of age or older. Seventy-seven percent of respondents were between 26-35 years. Only 3.3% were

between 56 and 65 years of age. Of the respondents, 67.2% reported four or more online courses taken. The demographic distribution showed 72.1% of respondents were female and 27.9% were male.

For this study, five online classrooms were selected within the same discipline at or near the same level of academic difficulty. To match academic difficulty, course title and grade level were considered. This was primarily determined by the numerical value placed in the course title as well as prerequisites. At the university, where this study was conducted, the following prefixes denote course level: 1000 freshman, 2000 sophomore, 3000 junior, 4000 senior/graduate level. All courses participating in the study were at the junior or above level in educational standing. The courses were in the subject area of psychology.

Online classes selected for this study were as follows: (a) Psychology of the Exceptional Learner, PSY 4200 and (b) Psychology of the Adolescent, PSY 4230. For this study, four sections of PSY 4230 were used for respondent recruitment and one section of PSY 4200. Respondents came from course taught by two instructors and all were exclusively online courses. The researcher was one of the two instructors.

The online courses selected for subject recruitment possessed the same online format and were delivered through Blackboard. All courses were exclusively online with interaction occurring between instructor and student electronically via email, through posts in the Blackboard classroom, or through personnel in the department of psychology. Class sizes range from 28 to 31 students, with interaction between fellow students and instructor in an asynchronous environment. Due to the nature of online learning, students

worked in the Blackboard classroom according to their own schedules and were given a two-week timeframe in which to complete the survey.

Data Collection and Instrumentation

Students completed an abbreviated form of the Sherer General Self-Efficacy Scale (SGSES) (Sherer, 1982) (see Appendix 1) and the Strachota Student Satisfaction Survey (SSSS) (2003) (see Appendix 2) to include specific demographic information. Both instruments were combined into one 28-question survey titled, “The Student Satisfaction Survey.” The survey was administered to each student who participated in the study. Due to the online nature of the five courses, an informed consent appeared before each survey attempt to ensure Institutional Review Board (IRB) standards were upheld and students understood the parameters of their participation in the study (see Appendix 3). Contact information was given so students could have questions answered and ensure complete understanding of the survey. Students did not receive feedback from either the SSSS or the SGSES after completion.

All data were collected anonymously with no way to track or collect information on the respondents beyond the instrument results. Students completed the instruments in lieu of an alternative extra credit opportunity offered in the classroom. Both the participation in this study and the optional extra credit paper held equal value for the student and provided the freedom to choose either to obtain the extra credit points.

The Strachota Student Satisfaction Survey (SSSS) (Strachota, 2003)

Survey methods are preferred for data collection in the online environment and can be broad in scope or more focused depending on the data preference. The SSSS instrument was developed for use in the educational setting to measure student

satisfaction as an online program evaluation outcome. The survey consists of 35 questions administered with a four-point Likert-type scale of (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. The survey can be completed in 30 minutes and is written at the 12.0 grade level. The survey is intended for college level students in the online environment and can be found within Strachota's (2003) dissertation entitled, *Student Satisfaction in Online Courses: An Analysis of the Impact of Learner-Content, Learner-Instructor, Learner-Learner and Learner-Technology Interaction*. There are no restrictions for using the survey.

The instrument was found to be reliable as determined by a pilot study and the Cronbach's alpha, the internal consistency or reliability coefficient for an instrument requiring only one administration (Fink, 2006; Strachota, 2006). All five constructs for the survey were measured for individual reliability coefficients: (a) learner-content, (b) learner-instructor, (c) learner-learner, (d) learner-technology interaction, and (e) general satisfaction. The instrument pilot study resulted in a Cronbach's alpha of .90 for the constructs of both learner-content and general satisfaction (Strachota). The constructs of learner-instructor interaction and learner-learner interaction resulted in a Cronbach's alpha of .89. The learner-technology construct was directly adopted from Cassidy and Eachus (2000), a pilot study showing a .97 reliability coefficient. For this study, the general satisfaction construct of the survey will be used.

For instrument validity, Strachota (2003) had the five constructs and their questions reviewed by a panel of subject matter experts and measurement experts in corresponding fields. Questions were modified or eliminated based on the experience and suggestions of the field experts. The process of question modification and elimination by

field experts gives a unique feature of validity to the instrument. For this study, the survey were modified to include 12 questions specifically relating to general course satisfaction.

The Sherer General Self-Efficacy Scale (SGSES) (1982)

The SGSES was one of the first developed general self-efficacy (GSE) measures. The scale consists of 17 questions to measure GSE as well as social self-efficacy. For this study, only 12 questions pertaining to GSE were used to provide a “general set of expectations that the individual carries into new situations” (Sherer et al., 1982, p. 664). The SGSES uses a five-point Likert-type scale (1) disagree strongly, (2) disagree somewhat, (3) neutral, (4) agree somewhat, and (5) agree strongly. The sum of item scores describes general self-efficacy, with the higher the score the higher the level of self-efficacy. The SGSES has been the most widely used GSE measure in clinical and personality research and in organizational settings (Iman, 2007). Chen et al. (2001) found internal consistency reliabilities of SGSES to be moderate to high (.76 to .89) Even minor modifications made to the instrument drastically change its outcome. Chen (2001) has found multifactor solutions to this issue in subsequent research.

Data Analysis

Collected data were analyzed using the PASW 18 statistics software program. One set of analysis was performed to address the research questions of this study. The analysis was somewhat similar to the Herbert (2006) study on course satisfaction and student retention in online courses. The data were examined with descriptive statistics and with correlations to determine the relationship between general self-efficacy and course satisfaction in the online environment. The analysis compared levels of general

self-efficacy and levels of course satisfaction to determine if the variables were correlated. The survey also asked for demographic information such as number of online courses completed, academic status, age, and gender. None of these factors provided a basis for this study.

Two scores resulted for each respondent, one for the Sherer General Self-Efficacy Scale (1982) and one for the Strachota Student Satisfaction Survey (2003). Scores were calculated by adding across items for each of the 12-question surveys. The variables in this study, general self-efficacy and course satisfaction, were discussed using descriptive statistics. A correlational analysis was used to determine the degree of possible relationship between the variables.

Data were collected via survey method giving two scores for each subject in each condition: general self-efficacy and course satisfaction. The analysis paralleled the Herbert (2006) study with calculated mean values for measures of central tendency on each of the survey questions. In this analysis, general self-efficacy and course satisfaction were measured using the correlational method. The Herbert study used independent t tests to compare means of course satisfaction and retention. Due to the nature of the variables and the parametric assumptions in this study, the correlational method fit nicely with the stated hypotheses. In particular, the parametric assumptions of normal distribution and interval level data with Likert scale items fit the data. To find a possible relationship and then possible prediction between the stated variables, these statistical analyses were well suited.

The Pearson product-moment (Pearson r) was used to measure the degree to which the scores (general self-efficacy and course satisfaction) relate to one another. In

this study, the research questions and the hypothesis were used to guide the data analysis. The relationship between two variables were examined from one sample. The data were at the interval level of measurement.

Summary

This study examined the relationship between general self-efficacy and course satisfaction using modified versions of the Sherer General Self-Efficacy Scale and the Strachota Student Satisfaction Survey. These variables were studied to determine if levels of general self-efficacy could be correlated with levels of course satisfaction. The research questions and hypothesis guided the study, maintaining focus on the problem and purpose. From the respondents, data was gathered for analysis to be statistically analyzed for purposes of study outcome. Chapter Four will discuss these findings in greater detail.

CHAPTER FOUR

ANALYSIS OF DATA

This chapter presents the results of this study. The first section presents descriptive characteristics of respondents. Secondly, three research questions are presented with data generated from this study. Statistical analysis of the Sherer General Self-Efficacy Survey (SGSES) is discussed. The Strachota Student Satisfaction Survey (SSSS), statistical analysis, and survey questions are presented. The final section addresses the research hypothesis, describing the correlation between variables: general self-efficacy and course satisfaction. A summary paragraph presents a brief overview of the chapter.

The purpose of this study was to provide information on the relationship between two variables: general self-efficacy and course satisfaction. This study explores these variables with statistical analyses to describe the correlation between students' general self-efficacy and their level of course satisfaction. This chapter details the results of the analysis performed on the data collected for purposes of this study. Results will be presented for the Sherer General Self-Efficacy Survey (SGSES) and the Strachota Student Satisfaction Survey (SSSS) with subsections for each instrument.

Organization of Data Analysis

First, descriptive characteristics of the respondents in the study are presented. Secondly, the research questions used to guide this study are discussed. Statistical methods used to answer the research questions by analyzing the survey questions and

their results will be examined. Finally, the research hypothesis will be presented along with the correlational method used for analysis.

Presentation of Descriptive Characteristics of Respondents

Demographic information of the 61 respondents revealed 67.2% reported four or more previous online courses taken. In this study, 40.9% of respondents reported their academic status as undergraduate and 59% graduate. The respondents in the sample were 25 years of age or older. Seventy-seven percent of respondents were between 26-35 years. Only 3.3% were between 56 and 65 years of age. Of the 61 respondents, 67.2% reported four or more online courses taken. The demographic distribution showed 72.1% of respondents were female and 27.9% were male. (see Table 1).

Table 1

Demographic Information N = 61		n	%
<hr/>			
Previous Online Courses			
	0-1 courses	2	3.3
	2-3 courses	18	29.5
	4 or > courses	41	67.2
<hr/>			
Academic Status			
	Sophomore	3	4.9
	Junior	11	18
	Senior	11	18
	Graduate	36	59
<hr/>			
Age			
	25-35	47	77
	36-45	9	14.8
	46-55	3	4.9
	56 or >	2	3.3
<hr/>			
Gender			
	Female	44	72.1
	Male	17	27.9

Research Questions and Hypothesis

The following questions guided this study and sought to address the current lack of research available in the area of general self-efficacy and course satisfaction.

1. What are the levels of general self-efficacy?
2. What are the levels of course satisfaction?
3. Is there a correlation between general self-efficacy and course satisfaction?

Research Hypothesis

Online students rate general self-efficacy relative to their level of course satisfaction.

A correlation between general self-efficacy and course satisfaction levels determine if levels of general self-efficacy predict levels of course satisfaction.

Analysis of Data

1. What are the levels of general self-efficacy?

To answer research question one, questions 1-12 from the Sherer General Self-Efficacy Scale (SGSES) were analyzed using descriptive statistics. The items were scored on a five-point Likert-type scale (1) disagree strongly, (2) disagree somewhat, (3) neutral, (4) agree somewhat, and (5) agree strongly. The sum of item scores describes general self-efficacy with the higher the mean value the greater the agreement with the questions.

The N for each question was 61. (see Table 2).

Table 2

SGSES questions 1-12	Min	Max	Mean	SD
1. If something looks too complicated, I will not even bother to try it.	1.0	5.0	1.85	.853
2. I avoid trying to learn new things when they look too difficult.	1.0	4.0	1.78	.950
3. When trying something new, I soon give up if I am not initially successful.	1.0	4.0	1.86	.846
4. When I make plans, I am certain I can make them work.	1.0	5.0	4.18	.922
5. If I can't do a job the first time, I keep trying until I can.	1.0	5.0	4.26	.834
6. When I have something unpleasant to do, I stick to it until I finish it.	1.0	5.0	3.90	1.10
7. When I decide to do something, I go right to work on it.	1.0	5.0	3.85	1.18
8. Failure just makes me try harder.	1.0	5.0	3.81	.991
9. When I set important goals for myself, I rarely achieve them.	1.0	5.0	1.39	.689
10. I do not seem to be capable of dealing with most problems that come up in my life.	1.0	4.0	1.27	.635
11. When unexpected problems occur, I don't handle them very well.	1.0	5.0	2.06	1.12
12. I feel insecure about my ability to do things.	1.0	4.0	1.98	1.16

The range of scores on the SGSES were 20-40, and the mid-range score of 32-33 indicated the highest frequencies of general self-efficacy (n=12, 19.7%, see Table 3).

Table 3

SGSES range of scores for 61 respondents

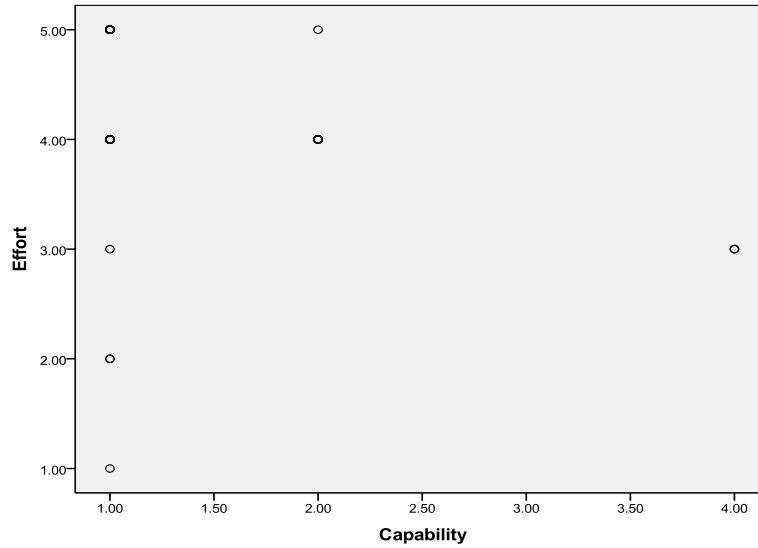
Score	Frequency	Percent	Cumulative percent
20.00	1	1.6	1.6
24.00	1	1.6	3.3
26.00	3	4.9	8.2
28.00	3	4.9	13.1
29.00	3	4.9	18.0
30.00	7	11.5	29.5
31.00	4	6.6	36.1
32.00	8	13.1	49.2
33.00	11	18.0	67.2
34.00	6	9.8	77.0
35.00	5	8.2	85.2
36.00	3	4.9	90.2
37.00	1	1.6	91.8
38.00	2	3.3	95.1
39.00	2	3.3	98.4
40.00	1	1.6	100.0
Total	61	100.0	

When looking at the questions rated by respondents based on their level of general self-efficacy, question 5 received the highest mean value ($M = 4.26$, see Table 2). The question asked respondents for their perceived level of effort to persist beyond failure, tapping directly into self-efficacy beliefs. The lowest mean value was given to question 10 ($M = 1.27$, see Table 2). Question 10 asked the respondent to rate their capability to deal with personal problems.

The mean values of these questions characterize the levels of effort and persistence in perceived self-efficacy for the respondents. From the analysis of the data,

there was a significant correlation between scores on effort and those on capability ($r(59) = -.29, p = .05$, see and Figure 1).

Figure 1



Similar to the Chyung (2007) research, this study also looked at self-efficacy, age, and gender. In the Chyung research and this study, descriptive statistics were used to compare motivational self-efficacy to each variable (see Table 4).

Table 4

Age Group	Gender	SE Levels
25-35	F (n) = 34	32.81
	M (n) = 13	32.00
	Combined (n) = 47	32.56
36-45	F (n) = 6	34.00
	M (n) = 3	28.00
	Combined (n) = 9	33.00
46 -55	F (n) = 2	34.50
	M (n) = 1	24.00
	Combined (n) = 3	30.00
56 or >	F (n) = 2	30.50
	M (n) = 0	00.00
	Combined (n) = 2	30.50

The data from this study showed similar outcomes to the Chyung research with females reporting higher levels of self-efficacy ($n = 44$, $M = 32.95$, 4 age groups) than males ($n = 17$, $M = 28$, 3 age groups). Age and self-efficacy were also examined in the Chyung study. This study found similar results in that the mean value of self-efficacy scores of younger respondents ($n = 56$, $M = 32.78$) tended to be higher than those of older respondents ($n = 5$, $M = 30.25$).

2. What are the levels of course satisfaction?

To answer research question two, questions 13-24 of the survey were analyzed using descriptive statistics. The 12 questions come from the SSSS. The items were scored with a four-point Likert-type scale of (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. The sum of item scores describes course satisfaction with the higher the mean value, the greater level of agreement with the questions. The N for all questions was 61.

Table 5

SSSS questions 13-24	Min	Max	Mean	SD
13. I feel this online class experience has helped improve my written communication skills.	1.0	4.0	2.91	.899
14. I was able to get individualized attention from my teacher when needed.	1.0	4.0	3.26	.772
15. Although I could not see the teacher in this class, I felt his/her presence.	1.0	4.0	3.01	.865
16. This course created a sense of community among students.	1.0	4.0	2.54	.848
17. I am very confident in my abilities to use computers.	1.0	4.0	3.39	.780
18. Most difficulties I encounter when using computers, I can deal with.	1.0	4.0	3.32	.723
19. I am very satisfied with this online course.	2.0	4.0	3.47	.673
20. I would like to take another online course.	1.0	5.0	3.65	.727
21. This online course did not meet my learning needs.	1.0	4.0	1.45	.720
22. I would recommend this course to others.	2.0	4.0	3.49	.673
24. I feel online courses are as effective as face-to-face courses.	1.0	4.0	2.96	.965

The range of scores on the SSSS were 22-45, the lowest score of 22 indicating poor course satisfaction (n = 1, 1.6 %). A mid-range score of 36 indicated the average course satisfaction (n = 10, 16.4 %). The highest level of course satisfaction was reported at 45 (n = 1, 1.6 %, see Table 6).

Table 6

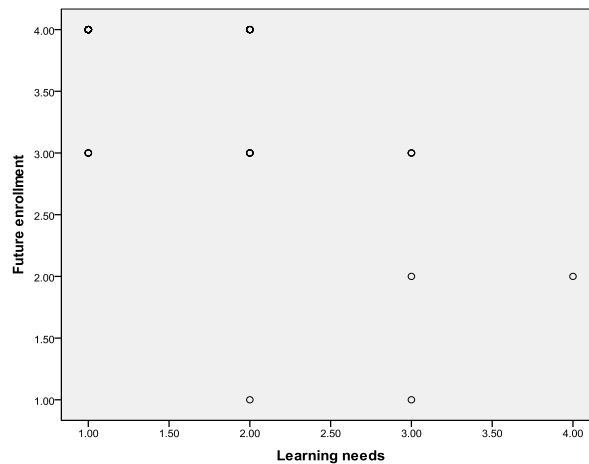
SSSS: range of scores for 61 respondents					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	22.00	1	1.6	1.6	1.6
	25.00	3	4.9	4.9	6.6
	27.00	1	1.6	1.6	8.2
	28.00	1	1.6	1.6	9.8
	29.00	1	1.6	1.6	11.5
	31.00	3	4.9	4.9	16.4
	32.00	3	4.9	4.9	21.3
	33.00	3	4.9	4.9	26.2
	35.00	3	4.9	4.9	31.1
	36.00	10	16.4	16.4	47.5
	37.00	5	8.2	8.2	55.7
	38.00	2	3.3	3.3	59.0
	39.00	5	8.2	8.2	67.2
	40.00	6	9.8	9.8	77.0
	41.00	1	1.6	1.6	78.7
	42.00	5	8.2	8.2	86.9
	43.00	4	6.6	6.6	93.4
	44.00	3	4.9	4.9	98.4
	45.00	1	1.6	1.6	100.0
	Total	61	100.0	100.0	

When looking at the questions rated by respondents based on their level of course satisfaction, the highest mean value was given to question 20 ($M= 3.65$). Question 20 asked if respondents would like to take another online course. The lowest mean value

was given to question 21 ($M = 1.45$), asking respondents to report satisfaction on learning needs.

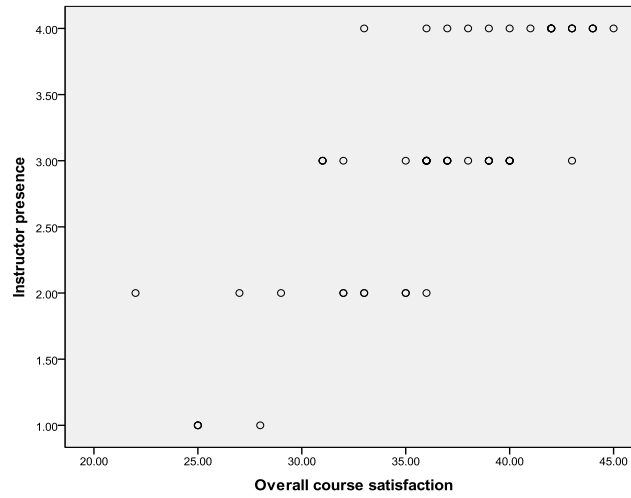
Both questions 20 and 21 reflect a measurement of student retention similar to the Herbert (2006) study. Herbert measured retention based on course completers whereas this study measured willingness to enroll in future online courses as a retention indicator. In this study, a significant relationship was found between desire to take another online course and learning needs ($r(59) = -.65, p < .01$). The relationship highlights the importance of student learning needs on their future enrollment (see Figure 2).

Figure 2



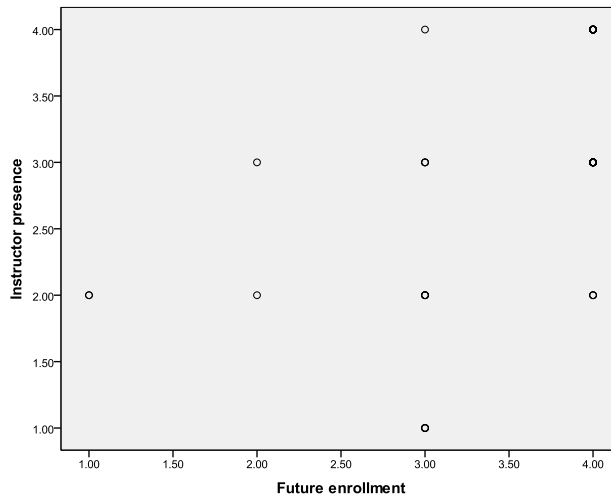
Similar to the Herbert (2006) study, a comparison of mean values for instructor presence and overall course satisfaction were analyzed. The values for instructor presence in this study were similar to instructor responsiveness found in the Herbert study. In the Herbert study, instructor presence held high value. However, in this study, a strong correlation ($r(59) = .80, p < .01$) between instructor presence and course satisfaction was found (see Figure 3).

Figure 3



In the Herbert study, instructor responsiveness was rated as important and course completion an indicator of congruency between student expectations and experience. For this study, a significant relationship between instructor presence and future enrollment was found ($r(59) = .53, p < .01$, see Figure 4).

Figure 4



In Yang et al. (2006), a significant relationship between the perceived instructor social presence and student motivational self-efficacy beliefs was found. The study shows that students who hold higher self-efficacy beliefs perceived higher levels of instructor

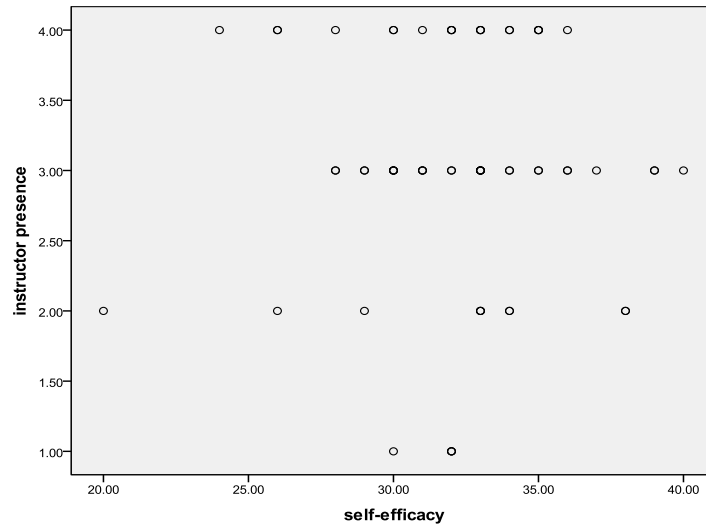
presence in the course. This study analyzed the similar variables, general self-efficacy and instructor presence, yielding different results. Respondents' general self-efficacy scores were compared to response on question fifteen of the survey. Table 7 shows the greatest proportion of students responded with 3 (agree somewhat) or 4 (agree strongly) to the question, reporting a mean of 3.01 for high instructor presence at 45.9 %.

Table 7

Q15 SSSS: Instructor presence					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	4	6.6	6.6	6.6
	2.00	10	16.4	16.4	23.0
	3.00	28	45.9	45.9	68.9
	4.00	19	31.1	31.1	100.0
	Total	61	100.0	100.0	

Data from Table 3 revealed 11 respondents scoring at 33.00 on general self-efficacy, the lowest score at 20.00 and the highest score at 40.00. In this study, the data did not reveal a significant relationship between general self-efficacy and instructor presence ($r(59) = -.02, p < .05$, see Figure 5).

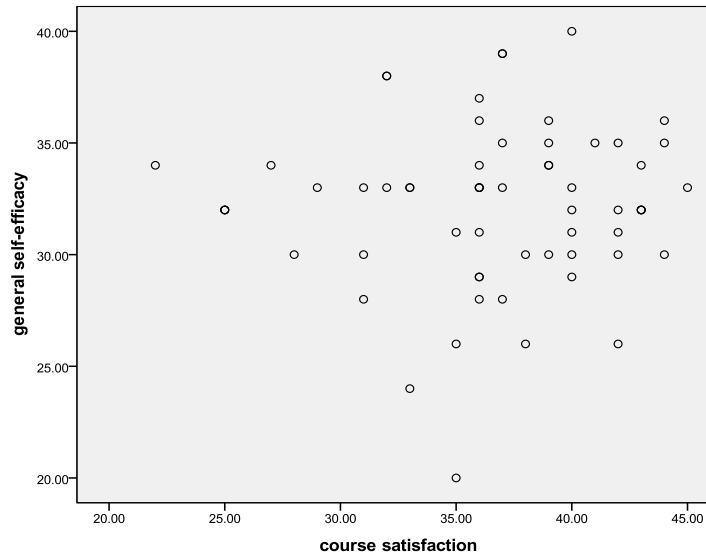
Figure 5



3. Is there a correlation between general self-efficacy and course satisfaction?

To answer research question three, the sum of scores across items (questions 1-12 and questions 13-24) were analyzed using Pearson r ($r(59) = .04, p < .05$, see Figure 6).

Figure 6



There was no significant correlation found between general self-efficacy and course satisfaction ($r(59) = .04, p < .05$). Reported levels of general self-efficacy did not generate a significant relationship with reported levels of course satisfaction in this study.

Research Hypothesis

Online students will rate general self-efficacy relative to their level of course satisfaction. A correlation between general self-efficacy and course satisfaction levels will determine if levels of general self-efficacy predict levels of course satisfaction.

For this study, the data show cause to reject the research hypothesis. The reported relationship between general self-efficacy and course satisfaction ($r(59) = .04, p < .05$) does not support the research hypothesis.

Summary

This chapter described the findings from this study. Review of the demographic findings of the study, descriptive statistics of the surveys, and review of the relationship between general self-efficacy and course satisfaction, based on the SGSES and the SSSS results were summarized.

In terms of demographics, all respondents had completed an online course with over half reporting four or more course completed. The majority of respondents were graduate students, well over half fit into this category. Three-quarters of the respondents fell within the young adult age range. Gender was divided with the female group of respondents at under three-quarters and the male group slightly less than one-quarter of the total respondents.

Three research questions were addressed and answered. For general self-efficacy, the range of scores was reported. A significant relationship between persistence and

capability was discussed. Demographic comparisons with self-efficacy were explored. In course satisfaction, the range of scores were reported. A significant relationship between future enrollment and learning needs was found in the data analysis. Instructor presence had a significant relationship with course satisfaction and the impact of course satisfaction on future enrollment was also observed as significant. No significant relationship between general self-efficacy and instructor presence was found.

Data analysis found no significant correlation between general self-efficacy and course satisfaction, leading to rejection of the research hypothesis. In this study, general self-efficacy was not related to course satisfaction in the online learning environment. The topic does merit further investigation and will be discussed further in Chapter Five.

CHAPTER FIVE

FINDINGS, CONCLUSIONS, AND IMPLICATIONS

Introduction

Could a student's general self-efficacy beliefs be a determining factor for course satisfaction? This final chapter provides a review of the study addressing this question and the results generated from the research conducted. Also included in this section are the summary of the study, findings, conclusions, and implications. Lastly, the possibilities for further research and summary will be presented.

Summary of the Study

The following section will provide a brief overview of the study. This summary section will discuss the problem, type of data collected, and research questions. Secondly, this section will also give a brief review of the literature and discuss the respondents.

Problem

Research linking general self-efficacy and course satisfaction is inadequate (Vekiri & Chronaki 2008). Studies have examined student satisfaction and retention (Herbert, 2006), self-efficacy and gender in online learning (Chyung, 2007), and the relationship between academic motivation and social ability in online courses (Yang, Tsai, Kim, B. Cho, M, & Laffery 2006) to name a few. Many questions remain unanswered and untried in this research area to include the relationship between a student's level of general self-efficacy and their level of course satisfaction.

Data

The data collected for this study were quantitative in nature as well as descriptive. This descriptive nature of the information collected was useful in establishing the degree of association between the variables: general self-efficacy and course satisfaction. Descriptive statistics, correlation, and scatter plot were used to analyze scores for each survey in support of the research questions as well as similar studies in the review of literature.

The correlational method was used to explore the relationship between general self-efficacy and course satisfaction. Statistical analysis of these two variables was used to determine if a student's general self-efficacy beliefs may be related to course satisfaction. This measurement outcome was utilized to accept or reject the research hypothesis.

Research Questions

The research questions for this study sought to address the current lack of research available in the area of general self-efficacy and course satisfaction.

1. What are the levels of general self-efficacy?
2. What are the levels of course satisfaction?
3. Is there a correlation between general self-efficacy and course satisfaction?

Literature

The literature review provided a knowledge base to approach the study with informed theory and research. Bandura (1986) pointed to individuals' self-efficacy as a main determinate in the outcome of any behavior they decide to engage in, establishing the relationship between self-efficacy and performance. DeBourgh (1999), Moore and

Kearsley (2005), and Herbert (2006) observed the importance of student satisfaction in distance learning programs. Together, self-efficacy and course satisfaction came to be understood through study of the literature and their application to online learning.

Academic success and failure have been widely studied within the construct of self-efficacy (Bates & Khasawneh, 2007). Self-efficacy is a recurrent theme when the individual, learning, and achievement motivation are discussed (Merriam et al., 2006). A strong connection exists for the student between achievement motivation and the role of self-efficacy beliefs when it comes to academic choices, learning, and academic performance (Bandura, 1997; Johnson et al., 2008).

The concept of learning and its theories provide a framework by which to approach the topic of adult learning. This framework may lead to a better understanding of the concept of self-efficacy within the adult population. A learning style exclusive to the adult learner is transformative learning (Mezirow, 2000). Transformative learning is individualistic and dependent on the conditions in which the learning takes place. For the adult, intrinsic and extrinsic forces drive transformative learning. These driving forces are shaped by the social complexity in the world of the adult learner.

For the adult learner, this transformative knowledge brings a new construct in information organization and a greater sense of self-efficacy. Critical reflection is the primary component needed for self-directed learning (Cranton, 2006). Emanating from within, critical reflection provides not only a new knowledge base from which to draw upon but an increase in self-efficacy.

Adult learning theory holds little common ground with traditional learning theories often ascribed to children. Adult learners are more self-directed and motivated

from within, confronting new knowledge acquisition with the vast experiential knowledge they already possess. From the adult learning approach, inquiry and solutions should be relevant to life and life situations (Knowles, 2005).

The work of Malcolm Knowles (2005) on andragogy resulted in five specific assumptions about the learning theory ascribed specifically to the adult population. Knowles' work on the adult learner examines principles and critical elements of learning specifically known for the adult learner in comparison to traditional models reserved for children. The adult learning theory holds three basic presumptions: (a) adults learn practically and need purpose to their learning experience, (b) experimental opportunities are essential for adult understanding of new knowledge concepts, and (c) learning best takes place when adults can readily apply new knowledge and find its value immediate to them (Lara, 2007).

The practicality of the adult's orientation to learning places a premium on knowledge value. The adult learner will determine knowledge worth based on its readiness for application. Adult learners value new knowledge application; the main factors for placing a value on knowledge are incorporation into the learner's existing sense of self and life situations (Bruner, 1960).

Distance education is a type of learning environment characterized by distance teaching and distance learning (Keegan, 2005). History, growth, and developed theories of distance education provide a foundational understanding of the need for interaction and communication in the online environment.

Student satisfaction is a highly valued commodity in all institutions of higher education. Advantages to the student who engages in distance education have been

identified and in part may explain why over 20 % of all U.S. higher education students were taking one or more online course in the fall of 2007 (Sloan-C).

De Bourgh (1999) named the distance education instructor a primary predictor in course satisfaction while Moore and Kearsely (2005) maintain that course satisfaction does not always lead to student achievement. Herbert (2006) supports a relationship between student satisfaction and instructor interaction with communication based on identified student needs in the online environment. These studies provided a strong basis for the study of course satisfaction.

Respondents

Respondents in this study were students from a mid-size public university in the Midwest. The respondents were enrolled in at least one exclusively online course, undergraduate or graduate level, at the time of the study. All respondents completed one survey consisting of the Sherer General Self-Efficacy Scale (SGSES) and the Strachota Student Satisfaction Survey (SSSS). Demographic information for respondents was gathered during the administration of the survey. Number of previous online courses, academic status, age, and gender were characteristics measured in this study.

Findings

Within the general self-efficacy data, significant relationships were discovered. Respondents showed a high level of effort to persist beyond failure and a high level of capability to deal with their problems. Findings also revealed results similar to the Chyung (2007) research on self-efficacy, age, and gender. Mean values in this study attributed higher levels of self-efficacy to female and younger students.

Levels of course satisfaction were analyzed yielding significant relationships within the outcomes. A significant relationship was found between future enrollment in online courses and learning needs. Similar to Herbert (2006), online students are more apt to consider future enrollment in courses if they feel their current learning needs are being met.

Instructor presence and overall course satisfaction were analyzed in this study with results similar to Herbert (2006). Online students are overall more satisfied with a course in which they rate the instructor presence in the classroom environment as high. Future enrollment was found to have a significant relationship with instructor presence as well.

As in the Yang et al. (2006) study, the two variables of motivational self-efficacy beliefs and instructor presence were compared. A significant relationship was found, determining students with high motivational self-efficacy beliefs felt more connected to the instructor. (Laffey et al., 2006) was highlighted in the Yang study, finding the predictive value of co-presence to learning satisfaction.

In this study, the correlation between general self-efficacy and course satisfaction, yielded no significant relationship. A student's general self-efficacy beliefs are not a determining factor of course satisfaction. Levels of general self-efficacy were reported with no significant impact on course satisfaction resulting in the rejection of the research hypothesis.

Conclusions

Based on the three research questions guiding this study, several noteworthy conclusions resulted from the investigation of general self-efficacy and course

satisfaction. Some limitations in design, respondents, and the surveys have been noted and will be discussed here.

Design

The design of this study was quantitative in nature and descriptive. This design was selected to establish associations between the variables: general self-efficacy and course satisfaction. Participants were selected from online courses in session at the time of the study and all respondents were anonymous to the researcher. After completion of the data collection, it was noted a focusing statement on specific instructions guiding the participants to refer to their online experience might have provided better understanding of respondent self-efficacy. Responses on the general self-efficacy survey were not always consistent. Respondents may rate their ability to persevere at a difficult task as high while rating their certainty of succeeding as low. A focusing statement might have influenced this outcome.

The findings seem to be consistent with Bandura (1983) and his social cognitive theory stating self-efficacy cannot be generalized. The domain specificity of self-efficacy could very well be the reason for inconsistent responses on the general self-efficacy survey questions. The researcher does not seek to discredit the value or use of the SGSES. However, the SGSES, though widely used and accepted as a reliable and valid instrument, does contradict the domain specific component of Bandura's self-efficacy.

This design did not seek data that would comfortably fit the research hypothesis. The evidence gathered does present alternate explanations for general self-efficacy and course satisfaction in the online learning environment. The data revealed a significant

relationship between persistence beyond failure and capability in dealing with problems. For online students, technology and equipment are part of the online experience. Life responsibilities such as a career and family are also issues known to the online student. Both can present failure and problems. The literature shows issues specific to online learning such as technology have a direct impact on course satisfaction (Hara & Kling, 2000).

Understanding online student persistence and capability offers the instructor insight into formatting courses to encourage students. Results of this study may be beneficial not only to online course success but life responsibilities such as career and family. Online learning is self-motivated, with the negotiation of time in many ways. Though more survey questions regarding general self-efficacy and course satisfaction may have given a more thorough report from the respondent, the findings did present future areas of research to be covered later in this chapter.

Respondents

In this study, subject characteristics may have had an effect on the relationship under investigation. Due to the mostly homogeneous sample of subjects (younger, female, graduate students) the population lacked diversity. A larger population from which to sample may yield a different outcome. The possibility of measuring respondent characteristics and including them in the statistical analysis may also provide a better insight into self-efficacy. Investigating domain specific areas within the population may provide better understanding of self-efficacy levels derived from previous experience.

Similar to the Chyung (2007) study, the comparison of means for self-efficacy, gender and age in this study warrant further investigation. Though females did report a higher level of self-efficacy, the female population size was much larger than the male

population. The same holds true with the comparison of means between self-efficacy and age. The youngest adult population in the study was almost half of the respondent population. For both variables, gender and age, even distribution in the respondent population may yield different results.

Surveys

Mean values for the questions measuring course satisfaction showed consistency in factors previously established by the literature to determine course satisfaction. Following the Herbert (2006), Chyung (2007), and Yang et al. (2006) studies on instructor presence, demographics, and self-efficacy, this study examined these three variables. Based on the results of this study, it can be concluded the interaction of all three variables may determine student satisfaction and retention. Further research, with a specific focus on the interactions of these three variables is warranted.

Though the examination of the mean values for select questions from the survey rated respondents high in levels of general self-efficacy and moderate-high in course satisfaction, the statistical analysis did not support the hypothesis. When items added across scores were calculated, no significant relationship between general self-efficacy and course satisfaction was found. The purpose of this study was to establish the relationship between general self-efficacy and course satisfaction primarily due to the lack of current literature on the topic.

Reflecting on the literature and the findings of this study, the researcher believes a relationship of significance may be found between the variables general self-efficacy and course satisfaction with further research. Increasing the respondent population from which to sample would be a necessary course of action (Fink, 2006). The small sample

size in this study did not give a broad perspective on self-efficacy trends among the respondents. An increase in the number of instructors from which the sample was taken may provide a broader scope of information on course satisfaction. Increasing the sample size, directing focus on instructor presence, and demographics may result in a more statistically significant relationship between general self-efficacy and course satisfaction (Symons, 2000).

Implications

The results of this study have great value in terms of practical importance. This study may help to provide valuable information to online instructors by helping them understand general self-efficacy beliefs and course satisfaction. A large part of current and future learning is based on past academic performance. Knowledge of general self-efficacy beliefs may provide the instructor with an alternative way to understand struggling students in the classroom environment (Chyung, 2007).

By measuring self-efficacy, instructors may encourage academic motivation. If students are confident in their capabilities, this confidence will grow successively with each attempt to exercise them (Bandura, 1994). Tapping into self-efficacy as a confidence indicator influences performance and beliefs about student's ability to achieve. Knowledge of this phenomenon may give instructors opportunity to promote success, thereby leading to greater course satisfaction at present and in the future.

Course satisfaction is a commonly measured factor in online courses. This study may provide a greater understanding of the variables inherent in the determination of course satisfaction by a student. With this information, instructors may adjust their methods of instruction to accommodate a more satisfactory learning environment. A

learning environment that understands self-efficacy needs and maintains a student satisfaction focus may very well see successful students who seek to take another course in the future (Herbert, 2006).

Demographic and institutional variables play a significant role in student satisfaction and retention (Kemp, 2002; Parker, 1999; Wojciechowski & Palmer, 2005). However, predictive variables, for not only the online course but also the institution, need to be further explored. Research has shown that students who are more satisfied with their institutions are more likely to graduate (Scalese, 1999; Carr, 2000), linking course satisfaction to the institution as well as the individual classroom. This study may prove to spur further research in the area of demographic as well as institutional variables in connection with course satisfaction.

Future Research

The outcome of this study opens the door for further research to be conducted. Exploring the area of online course satisfaction is beneficial to students and instructors. The satisfaction of a student can be directly tied to clarity of course design, interaction with instructors, and active discussions within the context of the course (Swan, 2001). With future research, these variables could be more precisely identified in a way instructors could implement. A qualitative design including interviews and open-ended questions would offer students the opportunity to provide specific feedback on stated variables. Collecting such data would provide insight as to exactly what the student views as satisfactory in rating a course or instructor. The rationale behind this research suggestion lay in what instructors find second only to successful learning, student satisfaction with their teaching.

Though academic success and failure has been widely studied within the construct of self-efficacy (Bates & Khasawneh, 2007), more research specifically dealing with course satisfaction is needed. A recurring theme found in the literature concerning observation of self-efficacy levels and the individual in learning is achievement motivation (Yang, et al. 2006). Studies show a connection between achievement motivation and the role of self-efficacy beliefs in students' academic choices, learning, and academic performance (Bandura, 1997; Johnson et al., 2008). For future research, a survey developed to target course satisfaction and academic motivation in online learning within the construct of self-efficacy would be beneficial.

In this study, self-efficacy was examined as a general condition, going outside the boundaries of the social cognitive theory. This study did not seek to prove or disprove Bandura (1977, 1986, 1993, 1994, 1997). However, from the results of this study, the relationship between generalized self-efficacy and course satisfaction is not significant. If a domain specific survey was developed for self-efficacy in academic motivation and course satisfaction, it may be possible to yield significant results.

The rationale of this future research draws upon the individual's use of cognitive appraisals and their perceptions of personal self-efficacy to evaluate their ability. This evaluation leads to the determination of whether or not a task can be successfully performed in a particular domain (Bandura, 1993). Incorporating Bandura's performance component of self-efficacy in survey development may be beneficial in targeting course satisfaction. If a survey was created with this principle source of information, the survey would assess the specific domain of course satisfaction adhering to Bandura's theory.

Summary

Problem

The purpose of this study was to provide information on the relationship between two variables: general self-efficacy and course satisfaction. This study added to the current research on online courses, self-efficacy in the online environment, and predictors of online success for both instructor and student. The research from this study may serve educators in the development of online courses, providing thoughtful direction for instruction. The research presented may prove beneficial in understanding Bandura's self-efficacy component of social cognitive theory as well as course satisfaction in the online learning environment.

Findings

The general self-efficacy data yielded significant results in correlation between respondent effort to persist beyond failure and capability to deal with problems. Findings similar to those found in the literature also revealed relationships between self-efficacy, age, and gender. Measurements of course satisfaction also yielded significant relationships within the outcomes. Significant correlations between future enrollment in online courses and learning needs as well as instructor presence and motivational self-efficacy were found.

General self-efficacy scores were compared to rates of instructor presence with no significant relationship found. No significant relationship between the variables general self-efficacy and course satisfaction could be established causing rejection of the research hypothesis. According to the findings of this study, a student's general self-efficacy beliefs are not a determining factor of course satisfaction.

Conclusions

Three research questions guided this study leading to several noteworthy conclusions resulting from the investigation of general self-efficacy and course satisfaction. Limitations in design, respondents, and surveys were also noted.

The design of this study was quantitative in nature as well as descriptive. This design was selected to establish associations between the variables: general self-efficacy and course satisfaction. Respondents were selected from online courses in session at the time of the study and all respondents were anonymous to the researcher. After completion of the data collection, it was noted a larger number of self-efficacy questions might provide better understanding of respondent self-efficacy. Responses on the general self-efficacy survey (SGSES) were not always consistent. The results seem to be consistent with Bandura (1993) and his social cognitive theory stating self-efficacy cannot be generalized. The SGSES, though widely used and accepted as a reliable and valid instrument, contradicts the domain specific component of Bandura's self-efficacy.

The evidence gathered does present alternate information for general self-efficacy and course satisfaction in the online learning environment. The data revealed a significant relationship between persistence beyond failure and capability in dealing with problems. Significant correlations between future enrollment in online courses and learning needs as well as instructor presence and motivational self-efficacy were also found.

Participants

Subject characteristics may have had an effect on the relationship under investigation. Due to the relatively homogeneous sample of participants (younger, female, graduate students); the results were skewed with an uneven distribution among

male and female. The comparison of means for general self-efficacy, gender and age in this study warrant further investigation. For both variables, gender and age, even distribution in the respondent population may provide different results thereby presenting alternate views of their relationship to self-efficacy.

Surveys

Mean values for the questions measuring course satisfaction showed consistency in factors previously established by the literature to determine course satisfaction. Research on instructor presence, demographics, and self-efficacy were examined in this study. Based on the results of this study, it can be concluded the interaction of all three variables may determine student satisfaction and retention. Further research, with a specific focus on the interactions of these three variables is warranted.

The purpose of this study was to establish the relationship between general self-efficacy and course satisfaction primarily due to the lack of current literature on the topic. Though the examination of the mean values for select questions from the survey rated respondents high in levels of general self-efficacy and moderate-high in course satisfaction, the statistical analysis did not support the hypothesis.

Conclusions

Based on existing literature and the findings of this study, the researcher believes a relationship of significance may be found between the variables general self-efficacy and course satisfaction with further research. Increasing the participants and the number of instructors from which the sample is taken may provide a broader scope of information on course satisfaction. Increasing the sample size as well as focusing on the important key variables, general self-efficacy and course satisfaction, may result in a more

statistically significant relationship. The development of a domain specific survey for self-efficacy in online learning and course satisfaction may provide an alternate view of the relationship among these two variables.

Sherer General Self-Efficacy Scale

1. If something looks too complicated, I will not even bother to try it.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

2. I avoid trying to learn new things when they look to difficult.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

3. When trying something new, I soon give up if I am not initially successful.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

4. When I make plans, I am certain I can make them work.

- Disagree Strongly
 - Disagree Somewhat
 - Neutral
 - Agree Somewhat
 - Agree Strongly
-

5. If I can't do a job the first time, I keep trying until I can.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

6. When I have something unpleasant to do, I stick to it until I finish it.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

7. When I decide to do something, I go right to work on it.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

8. Failure just makes me try harder.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

9. When I set important goals for myself, I rarely achieve them.

- Disagree Strongly
 - Disagree Somewhat
 - Neutral
 - Agree Somewhat
 - Agree Strongly
-

10. I do not seem to be capable of dealing with most problems that come up in my life.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

11. When unexpected problems occur, I don't handle them very well.

- Disagree Strongly
- Disagree Somewhat
- Neutral
- Agree Somewhat
- Agree Strongly

12. I feel insecure about my ability to do things.

- Disagree Strongly
 - Disagree Somewhat
 - Neutral
 - Agree Somewhat
 - Agree Strongly
-

The Strachota Student Satisfaction Survey with Demographic Questions

1. I feel this online class experience has helped improve my written communication skills.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

2. I was able to get individualized attention from my teacher when needed.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

3. Although I could not see the teacher in this class, I felt his/her presence.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

4. This course created a sense of community among students.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

5. I am very confident in my abilities to use computers.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

6. Most difficulties I encounter when using computers, I can deal with.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

7. I am very satisfied with this online course.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

8. I would like to take another online course.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

9. This online course did not meet my learning needs.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

10. I would recommend this course to others.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

11. I learned as much in this online course as compared to a face-to-face course.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

12. I feel online courses are as effective as face-to-face courses.

- Disagree Strongly
- Disagree Somewhat
- Agree Somewhat
- Agree Strongly

13. Age at the time of completing this survey

- less than 18
- 18-25
- 26-35
- 36-45
- 46-55
- 56-65
- 66+

14. Student classification based on college credits completed

- Freshman
- Sophomore
- Junior
- Senior
- Post-bacc
- Graduate Student
- N/A

15. Gender

- Female
 - Male
-

16. How many online course have you taken at the college level?

- 1
 - 2
 - 3
 - 4+
-

Appendix 3

Informed Consent

You are invited to participate in a study on course satisfaction in the online classroom. It is up to you whether or not you would like to participate. If you decide not to participate, you will not be penalized in any way. You can also decide to stop at anytime without penalty. If you do not wish to answer any of the questions, you may simply skip them. You may withdraw your data at the end of the study. If you wish to do this, please tell me before you submit your data online. Due to the anonymous nature of the study environment, I will not be able to identify and/or remove your data once you have submitted it. Once you begin the survey, this will confirm your consent to participate in this study. The survey is called the Student Satisfaction Survey. This survey will take you about 20 minutes to complete. The survey is a scale survey. You will be asked to rate 12 questions on a four-point scale and 12 questions on a five-point scale. You will be asked four questions concerning age, gender, number of online courses taken, and grade level. Individual results cannot be provided because the data are anonymous. I will not record your name, student number, or any information that could be used to identify you. If you have any questions about this study, please contact Mrs. Nikki Gebara at 660-543-4185 or at gebara@ucmo.edu. If you have any questions about your rights as a research participant, please contact the UCM Human Subjects Protection Program at 660-543-4621.

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