# INSTRUCTIONAL AND LEARNER VARIABLES THAT PREDICT SATISFACTION AND HIGHER GRADES IN ON-LINE COURSEWORK

By

JOSHUA T. FISCHER

Bachelor of Arts
Oral Roberts University
Tulsa, Oklahoma
1994

Master of Arts
Oral Roberts University
Tulsa, Oklahoma
1996

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
August, 2002

INSTRUCTIONAL AND LEARNER VARIABLES

THAT PREDICT SATISFACTION AND

HIGHER GRADES IN ON-LINE

COURSEWORK

Thesis Approved:

Diane Montgomery

Thesis Advisor

Steven Harris

Dale R. Lyon

Timothy J. Pettitone

Dean of the Graduate College

## ACKNOWLEDGMENTS

Throughout my doctoral program, even before she was my chair, Dr. Diane Montgomery was a constant friend, confidant, and advisor. At each step throughout my program she has been available for counsel and assistance whenever I have needed either. My deepest thanks and sincerest appreciation go to you, Diane.

Additionally, I wish to thank Dr. Dale Fuqua for all of his help in understanding and interpreting the data. I enjoyed our discussions on the subject (and those off the subject as well).

I would be remiss if I did not mention my doctoral committee as a whole: Dr. Diane Montgomery, Dr. Kay Bull, Dr. Steve Harrist, and Dr. Dale Fuqua. I have been extremely grateful for the direction and guidance that each has provided. Thank you for spurring me on with new ideas.

I would like to thank my parents for their undying support for my education. You always said I could make it, and I did.

I could not have done this without the support of my family. Thank you Kelly and Katy for understanding when I had to work instead of play with you. You are such wonderful girls. Without the support of my wife, I am not sure where I would be today. You have been a constant support, proofer of my work, muse, and friend. I love you (the most) with all my heart!

Thank You, Lord, for giving me the dream in the first place.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

# CHAPTER ONE

## INTRODUCTION

Students, teachers, administrative personnel, and parents are concerned about the quality of education. Whenever there are modifications to a program of traditional study, additional concerns arise about the quality of the program and the information to be learned by the student. Distance education is the all-encompassing term for the delivery of education in which teacher and student are separated by time, space, or both (Perraton, 1988). In the case of on-line education, a subset of distance education delivered in an electronic format, educators become concerned with meeting the needs of the student in the context of physical separation from and community with other students and the teacher (Rewick, 2001).

Throughout the history of distance education from 1782 to the present, there has been an outcry by the opponents of distance education (Galusha, 1997). The antagonists to distance education cited many issues including that of disconnectedness of the student from the faculty member's observance. A special committee (Perley, 1999) of the American Association of University Professors (AAUP) studied the distance education model and noted several additional concerns:

- How can educators ensure that the content of courses offered via this new medium is as rigorous as the content offered face-to-face in a classroom?
- How do educators know if the quality of learning on-line is less than, equivalent to, or an improvement on learning in a traditional setting?

- Is it possible to have one-on-one interactions with and among students in an on-line course?
- In this age of restricted budgets, does the financial investment needed to fund on-line technologies detract from support for existing educational needs?

Distance Education has been divided into a series of generations (Powell, McGuire, & Crawford, 1999). The first generation of distance education was established with the advent of the railway and postal services: a two-way communication between student and teacher. The next generation was founded with the near-universal access to telephones, radio, and television. With real-time interaction available through audio-, video-, and computer-based communications, a third generation of distance education has now been realized. A fourth generation is described as a seven-by-24 asynchronous interaction with little delay promoting reflection and allowing a voice for each group member.

The traditional model continues to be challenged as society focuses on service-oriented business. No longer do institutions of learning have an unchallenged position. Rather, their constituents are beginning to require personalized service for the expenditure of their money. As a result, education must be developed in a manner that serves the student.

Yet there are still those who resist the ideas of change (Dorsey, 2001). Dr. Wen-Song Hwu, while at Oklahoma State University, noted this resistance by saying, tongue-in-cheek, that he likes to be able to "smell" (personal communication, Fall 1997) his students, despite what effective modifications to the program of study could be made to

replace face-to-face teaching. In today's society, with fast-paced business, technology-centeredness, five-careers-in-a-lifetime, and family juggling, many people find themselves lacking the time, the money, and the education needed to advance financially and to permit more time for leisure. On-line education becomes the option chosen because of the convenience (Simonson, Smaldino, Albright, & Zvacek, 2000). The critics say that on-line education is less of an education. This has not, however, been demonstrated (Clark, 1983). Even so, on-line education's toehold in the worldwide education scene has created vast opportunities for the student (Simonson et al., 2000)

Distance education field statistics regarding courses and student numbers are witness to the vital need to have solid curriculum tailored to student needs and the students desire for something different than traditional models. In the 1994 - 1995 academic year approximately 25,730 courses were offered through distance education methods (National Center for Education Statistics [NCES], 1998). The International Data Corporation (IDC) (1999) released a report, *Online Distance Learning in Higher Education, 1998 – 2002*, that indicated distance education students will number at roughly 2.23 million by the year 2002 (International Data Corporation [IDC]). The full graph (Figure 1) from the report is shown below:

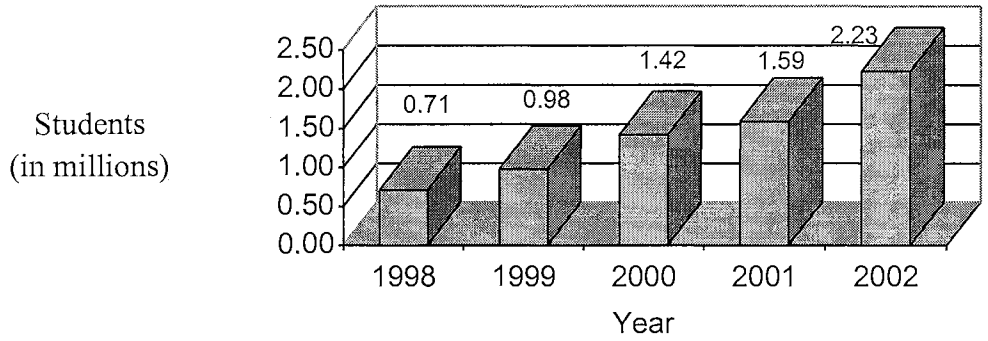



Figure 1: Number of Students Enrolling in Higher Education Distance Learning Courses, 1998-2002

Sau Ching Lau, senior analyst for Education Markets Research at IDC, attributes these numbers to the technological enhancements that have allowed for barriers to entry to be removed (IDC). Generally speaking, an annual growth rate of 33% is expected through 2002 (IDC). *The Chronicle of Higher Education On-line* carries another pertinent point in this discussion. Carnevale (1999) relates the belief of some, such as William A. Draves of the Learning Resources Network, that on-line courses of 1000 students will be common replacements of large lecture classes. By 2004, IDC predicts that on-line courses will become more prevalent than face-to-face courses (Charp, 2002). However, many fear that this replacement will not be any more effective if the classes only add a layer of technology without strong distance educational method and theory.

When students interact in a subject matter on an emotional level, a connection is formed. This connection is what causes learning (O'Loughlin, 1997). Therefore, the affective portion of school is vital to the process of education, which, some say, develops on-line only with collaborative learning. Others say that community develops when students interact in asynchronous discussion (Bull, personal communication, June 5, 2002).

## Theoretical Framework and Definitions

In this study there is one primary theory being researched and three additional supporting constructs that are presumed to play an important role in the development of a successful Internet learning environment within the context of on-line education. The research question, concept of the problem, and development of the research instrument are based on the theory of constructivism. Supporting this theory are the constructs of empowerment, sensation-seeking, and success within on-line education. In constructivist theory, experience is the index and basis for meaning which, as a result, places learning in true-to-life situations (Applefield, Huber, & Mollem, 2000). By giving the individual autonomy and empowering the individual to make decisions about his or her learning, it is believed that the learner will more fully appreciate the learning experience (Robotham, 1995). Sensation-seeking is a measure of an individual's propensity towards new experiences (Zuckerman, 2000) which may be a characteristic of on-line education learners. The final construct being considered is an individual's expectancy for success in his actions.

These constructs, while not connected in the research, have led to the development of the ideas behind this study and perhaps the development of new theory and further research. Each of the constructs may be a component of what motivates the on-line student to continue in a program of study, be satisfied doing so, and have higher grades as a result. By identifying these concepts with the study instrument, connections that explain on-line learning are made. A summary review of these theories and concepts follows.

## Distance Education

There are many theories that have been utilized in the creation and development of distance education. Holmberg (1989) delineates three primary segments of distance education: distance learning, distance teaching, and distance organization and administration. These areas can be summarized as follows:

- Distance learning: "motivated deep-learning as an individual activity" (p. 162).
- Distance teaching: "guided and supported by non-contiguous means that activate the student" (p. 162).
- Distance organization: "empathy" and "liberal organizational-administrative structures and processes" (p. 164).

This summarization embodies the ideals of a solid program of distance education study and enhances the understanding of students of distance education. The problem addressed in this study is based upon an educational model established in distance learning.

## Constructivism

One important theory in education today is the idea of constructivism (Cooper, 1993). Briefly, constructivism holds that the teacher serves as a scaffolder to learning levels of the student. VanTassel-Baska (1994) explains that students in the constructivist model "constructs their own knowledge—their own schemata—through active intellectual processes" (p. 370). This study utilized an instrument based on critical constructivism. Kincheloe noted that critical constructivists:

> ask what are the forces which construct the consciousness, the ways of seeing of the actors who live in it. [...] Critical constructivism concerns the attempt to move beyond the formal style of thinking which emerges from empiricism and rationalism, a form of cognition that solves problems framed by the dominant paradigm, the conventional way of seeing (as cited in Jofili, Geraldo, & Watts, 1999, p. 8).

Constructivism is important to this study in that it is considered to play a significant role in the development of what is supportive to appropriate on-line education. As will be shown in chapter two, constructivism plays a key role in facilitating a positive affective environment, which, in turn, cues learning. This study seeks to determine the relationship between constructivism and course satisfaction and higher grades in on-line coursework.

Autonomy and Empowerment

Autonomy and empowerment are concepts that reflect the idea that a learner will gain more from an educational experience when given decision-making ability along with the teacher. Furthermore,

> Autonomous students decide on their own goals and objectives, acquire the information they want, collect ideas, practise skills while working on solving problems and attaining their objectives; also, they judge whether and to what extent, the study matter and what has been learned are relevant (Holmberg, 1989, p. 25).

As a result, autonomy plays a part in establishing the ideals of the one-alone learner as the enforcer of his or her own education. This study addresses the role that autonomy and

empowerment play in course satisfaction and higher grades in on-line coursework. Furthermore, constructivism in the classroom promotes student autonomy and empowerment (Olsen, 1999).

Sensation Seeking

Another concept that may play into the satisfaction level of a distance learner is his propensity towards sensation seeking. Individuals vary in their craving to seek out new and exciting experiences. This construct is used to consider the optimal level of stimulation (OLS), first developed by German scholar W. M. Wundt in 1873 (as cited in Zuckerman, Eysenck, & Eysenck, 1978). The formulation was used to understand the relationship between affective responses and stimulation intensity (Zuckerman et al., 1978). While this concept is discussed in greater detail in chapter two, it is a key ingredient to the focus of the study and the potential ensuing theory. To this end, this study sought to determine if this concept is a facet of the satisfaction of the distance learner and higher grades in on-line learning.

Success

Another aspect of this study is the expectancy for success that the student has towards education and life in general. Fibel and Hale (1978) describe this construct as "the expectancy held by an individual that in most situations he/she will be able to attain desired goals" (p. 924). If a student expects to succeed in life and in coursework, this may play into his or her ability to be satisfied and continue in on-line education courses. As a result, a measure of this expectancy is considered in this study.

## Statement of the Problem

There are many groups that stand to benefit from on-line education. Hammon and Albiston (1998) mention three particular groups that benefit from on-line education: 1) business and industry, 2) administrators, teachers, and students of high school and postsecondary schools, and 3) adults enmeshed in community and familial obligations. Each of these groups has a different reason or need for on-line education. In each group, however, time and money play a large role. On-line education can deliver quality education (Clark, 1983) while conserving money and time (Simonson, et al., 2000), allowing these groups to reinvest these resources into other areas of need.

The problem is that business and industry, administrators, teachers and students, and adults enmeshed in life need to have an on-line program of study that is both satisfying and of value. The student who has strong study skills may succeed regardless of the format and quality of the course of study. However, the student with lesser abilities may need extra facilitation in the curriculum to make it possible to reach the next level. Traditionally, throughout the United States, special education is the term used when modifications are made to the kindergarten through 12$^{th}$ grade curriculum for individuals whose needs require a change to the plan of study. Realistically, however, students of all abilities and ages need modifications to the plan of study to learn more fully the subject at hand. Individualized education or differentiated curriculum is education tailored to meet the needs of the student where they are and to maximize their learning. Yet, this is not typically provided in courses on-line or otherwise.

As has been stated, there are those who oppose distance education (Galusha, 1997). However, the concern of this research is not focused on these issues. The focus is on the satisfaction level and grades of distance learners in their program of study. The student attempting distance learning must be satisfied with his or her learning in order to continue the process. Given the service-oriented nature of society, particularly in the United States, students may not continue taking on-line courses if they are not satisfied with instructional variables that are not acceptable to them. Additionally, learner variables may come into play that may make them less likely a candidate for on-line courses.

As a result, it is vital to learn about the issues that lend to the satisfaction and higher grades of the student in an on-line education program assuming that the intent is to be successful. The constructivist nature of the course, the student's perception of empowerment in the course, the level of sensation sought by the student, the student's expectancy for success, the student's grades, and their level of satisfaction all will be reviewed in order to determine what makes a student successful in an on-line course.

## Significance of the Study

There are various levels of significance for this study: national, commercial, educational, and individual. Each of these levels is affected by the education that an individual receives. If the education of the individual is affected by certain variables, a cycle plays out on each of these levels, causing a ripple in each to some extent.

At a national level, it is in the best interest of a nation to have a populace that continues to be resourceful, cutting edge in every field, and leading the nations in finding

better, stronger, and faster means and ideas. With a solid education, individuals are given the resources to succeed. They are given the understanding that they are not only educated in a particular field but that they have worth as an individual and can make their own contribution to the world to make it better. They become the leaders that begin to turn things around whether in their own family, city, state, or nation. It is at a grassroots level that education must be planned: educate the individual to re-establish and reaffirm a nation.

Commercially, well-educated individuals add to the profit margins of the business. They are more creative, if simply by their educational experience, and add to the product and service offerings of a company. When employees are educated well and are knowledgeable in what they are doing, less management is required, fewer resources are spent in tracking them, and an increase in profits is seen in the company overall.

The field of education naturally seeks to maintain a standard for passing on the knowledge it maintains. By maintaining a solid educational model, the ideals of the field are maintained. The knowledge is passed on effectively.

On an individual level, education guides the individual. The more solid the education, the more ready the individual is to affect education, business, and the nation. With the solid footing of a quality education, an individual is better prepared for life.

Even if effective educational models are not in place, each level described above will continue. However, each level may not be as effective or advanced as it could be with a quality program in place to educate the individual. Education must be formatted to best facilitate learning. The factors that contribute to the satisfaction of the learner must be considered and built upon in the distance-learning model. To this end, a study of

students who have chosen to seek non-traditional education, through on-line, distance learning, is in order.

## Purpose of the Study

The purpose of this study is to identify variables that contribute to the satisfaction of the distance learner and predict higher grades. Upon developing a curriculum that uses solid educational theory, satisfaction must be determined for those individuals who are seeking to utilize on-line education to meet their needs and attain their personal best. Given the student's satisfaction with this solid educational program, it is hoped that higher grades can be expected, which often are a determination of student success.

This study seeks to observe the variables that contribute to this satisfaction and predict higher grades in on-line education courses. To this end, the concepts of constructivism, autonomy and empowerment, sensation seeking, and success were measured to determine the factors that indicated satisfaction and higher grades for the on-line education student. Furthermore, learner measures of Constructivist Learner Environment Scale (Taylor, Watson, & Fraser, 1995), Perception of Empowerment Inventory (Roller, 1999), Sensation Seeking Scale (Zuckerman, 1979), and the Generalized Expectancy for Success Scale (Fibel & Hale, 1978) were used to gather data.

## Research Questions

Four research questions have been formulated to focus the study. They are as follows:

I. What are the dimensions of course satisfaction?

II. Do learner measures predict course satisfaction?

III. Does course satisfaction relate to higher grades?

IV. Do learner measures predict higher grades?

## Summary of Chapter

The history of distance education, the changing educational horizon, and the concerns of both proponents and opponents of the distance education model all suggest a need for additional research. Because it is vital to learn what issues contribute to the satisfaction and higher grades of the student in an on-line education program, this study reviews learner measures and course satisfaction in an effort to show a predictive relationship between these measures and course satisfaction and higher grades.

# CHAPTER TWO

# REVIEW OF RELATED RESEARCH

The purpose of this study is to explore variables that may contribute to the satisfaction of the on-line education student and predict a higher grade in an on-line format. It is important to make sure the overall program of study is designed to deliver the best possible education to the student. There are several fundamental concepts that are important to achieving this goal. Curriculum, the distance education model, affect and arousal, constructivist elements, autonomy and empowerment of the student, sensation seeking levels of the student, and the student's expectation for success are core concepts to be reviewed when designing education for on-line students.

## Curriculum

### Tyler's Rationale

Through his work in 1949, Ralph Tyler (as cited in Henderson & Hawthorn, 1995) presented early notions of what constituted curriculum with his rationale for curriculum development. His rationale consisted of four items:

1. Select objectives
2. Select pertinent learning experiences
3. Organize the learning experiences
4. Evaluate the learning experiences (Henderson & Hawthorne, 1995)

Although this rationale provided a needed organization for the school curriculum, it created a problem by standardizing. This standardization has contributed to several problems including:

- Dispirited teachers and students
- High rates of teacher and student absenteeism
- Lack of faculty collegiality
- The flight of innovative minds from the teaching ranks
- Unimaginative, tradition-bound instruction
- Superficial, plodding leadership (Henderson & Hawthorne, 1995)

Due to the perception of these problems, curriculum development theory continued to expand.

Hwu's Images of Curriculum

Dr. Wen-Song Hwu, in a series of lectures on Theory to Practice in the Curriculum at Oklahoma State University, described what he noted as the *Images of Curriculum*. Included in these images is a definition and description of curriculum. He discussed curriculum as viewed in the following ways:

1. Traditional - Ralph Tyler, etc.
2. Conversation - Negotiated curriculum
3. Cultural production - Curriculum as a reflection of the culture
4. Discrete tasks and concepts - Compartmentalized curriculum with the parts making up the whole
5. Social agents of change and reconstruction

6. *Currere* (personal communication, Spring 1998).

It is this last point that is extremely important when dealing with the curriculum in light of this research. *Currere* is the Latin verb root of curriculum and lends significant meaning to the idea of curriculum. It means, in rough terms, not only the course to be run (the books, materials, lesson plans, etc.), but also the running of the course (the life and times of the student). This is the definition that must be used to give the designer of curriculum a frame of reference about the student for which he or she is writing.

## Constructivism

Another important theory affecting the curriculum is constructivism. Chrenka (2001) noted that the role that teachers play is to "combine their understanding of how students learn with their own expert knowledge of a particular discipline in order to construct a framework for instruction" (p. 694). In constructivist theory, experience is the index and basis for meaning. As a result, constructivists recognize the importance of placing the cognitive experiences in authentic activities. Instruction should also attempt to focus the student on the ability to be able to construct and reconstruct plans for learning material in the real world (Applefield et al., 2000). In addition, constructivists hold that there is no truly shared reality. Each person's reality and meaning of that reality is constructed through experiences. Person A having a discussion with Person B can never be truly certain that Person B is understanding the meaning that Person A has for his or her words (Duffy & Jonassen, 1992). Vermette, Foote, Bird, Mesibov, Harris-Ewing, and Battaglia (2001) use the following acrostic to create a functional understanding of constructivisms:

**C**onnections: Learning is through connections of new information and previous knowledge.

**O**ptions: Choice is a key ingredient for students in the constructivist classroom.

**N**egotiation: Students should be allowed the freedom to garner a personal understanding of the new information.

**S**caffolding: Teachers assist students to reach new levels of understanding without giving them the direct information.

**T**ime: Time is not a constant for the subject matter in a constructivist model. Rather, the student's understanding of the subject is the guide for the amount of time needed.

**R**ubrics: Rubrics are used to help evaluate.

**U**nderstanding: Students must understand (and apply) the information to have learned it.

**C**ollaboration: The building of knowledge in a social context is central to learning.

**T**echnologies: Technology allows for greater resources for personalized research and discovery.

**I**nquiry: Learning is through inquiry about the subjects.

**V**ariety: Variety of backgrounds, levels of comprehension, learning styles, etc. should all be considered in the constructivist classrooms.

**I**ntentional Teaching: Though the teacher is a guide in this learning process, he or she is no less a teacher.

**S**tudent-Centered: The focus of constructivism is on the student, not the teacher.

Motivation: Relevance is central to the student's motivation level.

Standards: Standards are ever-present in the constructivist model in spite of the priority on student-centered learning, etc. These standards may include the ability of the student to think critically on the subject and perform other cognitive procedures while manipulating his or her knowledge of the subject (Vermette et al., 2001)

With these ideals as focus, constructivist curriculum designers can make a program of study that allows the student to learn through and focus upon concepts of value to the student.

## Differentiation

Differentiation is a means of developing the curriculum to meet the needs of the individual learner. In essence, the existing curriculum is, literally, made different for each student. Because each student has different abilities and levels of knowledge and understanding, the curriculum should be designed in an effort to meet them at their levels. This method of curriculum development is a key tool used in developing curricula for gifted students. VanTassel-Baska (1992) notes the key characteristics of differentiation:

- Use of a variety of resources
- No upper limit on expectations
- Facilitation emphasis by teacher
- Study topics from multiple perspectives
- More extended and involved
- Higher-level thinking

- Product alternatives
- More open-ended (creative responses)
- More conceptual/abstract
- More complex
- More focused on analysis/interpretation

Basically, differentiation of the curriculum allows learners to quickly peruse the lower cognitive levels of the assignments and progress to the higher, more complex and abstract portions as they are able. In so doing, it allows them to concentrate on what most teachers and curriculum developers truly want to pass on to the learners.

Distance Education Model

With the advent of the distance education model, a new delivery vehicle was available for curricula. With improvements in technology, distance education expanded. As technology continues to improve, on-line education can continue to blossom and develop these curricular factors.

Below is a hierarchy of the types/levels of distance education methods. The further up the hierarchy, the more likely the medium is to allow for the pertinent curricular factors.

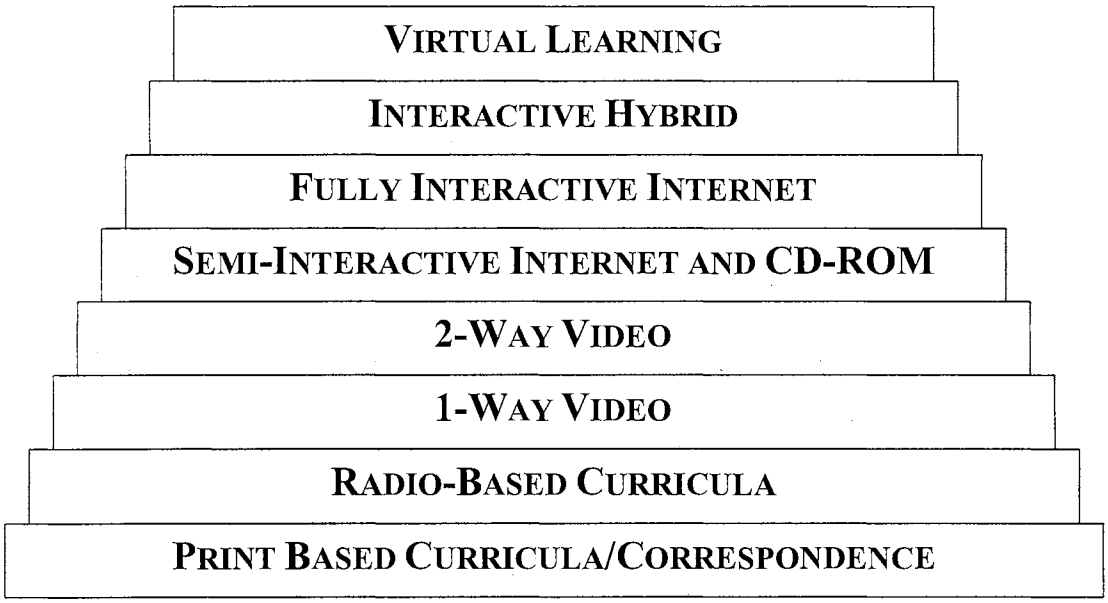



Figure 2: Hierarchy of Distance Education Methods

Print based curriculum/correspondence, which is typically totally controlled by the teacher, is simply paper-and-pencil variety learning mailed back and forth through U.S. post or a shipping company. Radio-based curricula also tends to be teacher-centered method using standard radio signals to deliver lectures. One-way video consists of a videotape of a class or lecture sent or transmitted to the student for viewing. The one-way video, when not accompanied with other methods, is a teacher-centered approach offering the student little control. Two-way video begins to allow for interaction and development of the curriculum with the desired components but also may be focused more on the teacher. Semi-interactive Internet and CD-ROMs are typically low-level devices, such as bulletin boards, Graffiti walls, and white boards, that are little more than electronic print-based materials but begin to offer some level of student control. The interactive Internet and hybrid methods are the current state of the art methods. They allow for chat rooms, news groups, tailored curriculum, with all the bells and whistles if done correctly. Virtual learning has not truly arrived yet. However, this model will allow

for a truly three-dimensional visual world with a full-body sensation suit and similar utilities offering students a great deal of control in their education.

## Affect and Arousal

Affect and arousal play a key role in memory formulation. A further discussion of these concepts will shed more light on their connection to learning and this study.

### Affect

Chamber's English Dictionary defines affect as "the emotion that lies behind action" (Landau, 1988, p. 21). Greenhalgh (1994) relates that emotional growth requires effective learning. He also notes the evidence that the capacity and quality of academic work improves/increases and attendance of students increases when human relations are improved. There is also a growing body of research that shows positive affect promotes positive information retrieval in memory. The converse is also seemingly true (Stein, Leventhal, & Trabasso, 1990).

VanTassel-Baska (1994) notes that by promoting a positive affective environment within the curriculum, self-actualization is promoted instead of simple knowledge acquisition, and humanitarian values rather than self-aggrandizement. A survey of gifted writers regarding the inclusion of affective content in curricular programs returned the following list:

- Individualized value systems
- Attitudes, beliefs, and values
- Interests and appreciations

- Persistence, independence, and self-concept
- Feelings, emotions, and awareness of self and others
- Interpersonal relations
- Humanitarianism
- Curiosity, risk taking, complexity, and imagination (VanTassel-Baska, 1994, p. 326).

Arousal

Anywhere from the late 1800's to the late 1970's the concept of arousal can be found in the psychological/physiological research. Arousal is, as expected, being excited, stirred up, awakened, etc. (American Heritage Dictionary, 1992). Through converse extrapolation, Berlyne (1960) theorized that affect heightens arousal. He makes this deduction based upon tests showing negative affect heightening arousal, and lab tests on rats showing positive affect heightening arousal. This fact is important when viewed with the research of Hebb (1955). He shows that optimal learning and response occur at the apex of the arousal curve (Zuckerman, 1979). The figure below (Figure 3) shows the relationship that Hebb found (Zuckerman, p. 25).

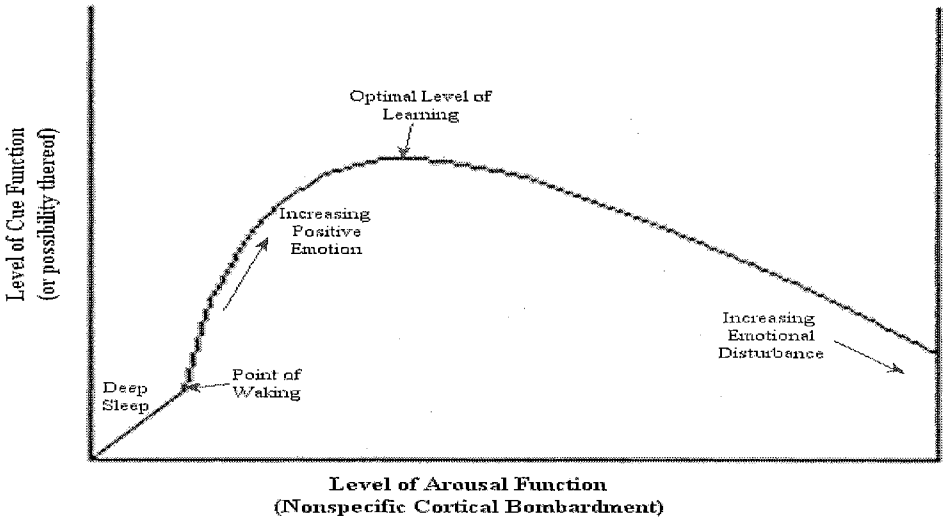



Figure 3: Level of Arousal Function

This figure shows that at an optimal level of arousal, learning is also at its optimum. While both positive (reward, etc.) and negative (fear, pain, etc.) affect cues arousal, it is this author's opinion that use of positive affective methods are more appropriate in for educational facilities in today's society. As a result, it can be postulated that:

POSITIVE AFFECTIVE ENVIRONMENT ⇒ AROUSAL ⇒ LEARNING

Figure 4: Cues of Learning

Development of Affect in the Distance Education Curriculum

As has been shown, there are methods for introducing the affective components to the on-line education curriculum. As seen in Figure 2, there are several types of distance education that could contain some of these methods.

In the June 1998 edition of the *Syllabus Journal*, Judith V. Boettcher of the Corporation for Research and Educational Networking discussed the idea of virtual

learning. Through a Holodeck scenario, based on the *Star Trek: The Next Generation* television series, the student would have a tailored program ready to meet their needs with a personal tutor designed to interact with their personality and needs most appropriately.

The Tylerian method has been one standard by which curriculum has been developed for some 50 years. It lacks, however, the space some need to be creative in meeting the needs of the students. Other methods have been developed and used for creating curriculum. However, curriculum is not just the part that the teachers and developers put together. It is also the course run by the student (Hwu, personal communication, Spring 1998). Constructivist educators hold that it is also important to be more of a guide to the student. Additionally, a differentiated curriculum provides students with the means to concentrate on the areas of interest and their cognitive level. Also, positive affect plays an important role as it relates to the cue function for arousal of the student. Finally, a discussion of the types of distance education methods currently in existence is summarized in the following figure:

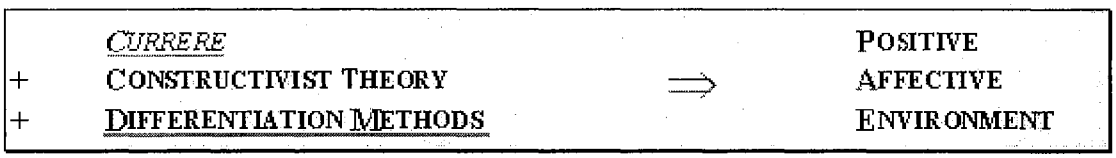



Figure 5: Cues of Positive Affective Environment

As postulated earlier in the discussion, the formula in Figure 4 indicates the significance of positive affective environment. Therefore, by understanding the concept of the whole curriculum, developed through a constructivist theory and utilizing differentiation, an

attempt can be made to create a positive affective environment for the student. With the positive affective environment, arousal is cued, which cues learning.

In the Holodeck classroom, the technology interacts with the individual as though he or she is part of the scene. The Holodeck can be programmed to monitor the real person's life outside the Holodeck to gain an understanding of where the student is coming from and adapt accordingly. If the correct program is written the primary Holodeck character acts as a guide or teacher. In fact the character's personality can be adjusted to fit the personality of the real individual. In a learning environment, the Holodeck adjusts to the level of the real individual. The Holodeck's setting could be programmed for any time and any place. The Holodeck can be the ideal classroom for the student: it takes into account *currere*, a constructivist mindset, differentiates the curriculum, and promotes a positive affective environment. Unfortunately, this is still science fiction, for the most part.

The single most important piece of technology in the classroom today is a very high maintenance piece of equipment. It usually requires maintenance several times a day. This is, of course, the guide or teacher. Because science fiction is not science fact, the teacher is the primary starting point for the technology being put in place. Giroux (1988) attempts to establish the importance of the teacher when he says, ". . . teachers as intellectuals will need to reconsider and, possibly, transform the fundamental nature of the conditions under which they work" (p. iii). Teachers are the starting point for developing these aspects into the curriculum and recognizing the needs of the students, even those at a distance. The computer and other technologies can be used to enhance the curriculum or the teacher.

Until there is something as innovative and advanced as the Holodeck classroom, it is up to the intellectual educators of today and tomorrow to continue developing better means to reach those students not usually educated. Some of those students are waiting for the right educator to inspire them in a life-long learning process.

The definitions of curriculum, constructivism, differentiation, affect, and arousal lend to the understanding of how education in general could be. It is important to understand these concepts to see how they can work together and produce a viable educational option for learners. Upon establishing a solid curriculum and the necessary components of the course materials, it is also important to review the concepts of constructivism, autonomy and empowerment, satisfaction, sensation seeking, and success which are underlying theories of the research instrument.

## Constructivism

Formed in the fires of Dewey, Stalinist revolution, and the Progressive movement, Constructivism has had contributors such as Piaget, Vygotsky, Gardner and Bruner to help refocus and develop the theory into its current form (Vermette et al., 2001). Starting with the reform movement of 1983, the conception of contemporary constructivism has gained momentum in the American educational scene (Vermette et al., 2001). Constructivism is a theory that holds that the best means of developing learners is to allow them to construct their own schema of knowledge. In doing so, the learners are able to process information in a way that is important and pertinent to them as opposed to the manner in which a teacher would see fit. In conjunction with the teacher or guide, students develop a plan of study that would lead them to the information that they desired

to learn. They would negotiate the items they would study, projects they would do, and assessments that they would complete to demonstrate their knowledge in the subject matter. Applefield, et al. (2000) discuss four primary tenets of constructivism agreed upon regardless of the particular approach of constructivism:

1. Learners construct their own learning
2. The dependence of new learning on students' existing understanding
3. The critical role of social interaction
4. The necessity of authentic learning tasks for meaningful learning. (p. 37)

Alesandrini and Larson (2002) point out the following about constructivism:

- Learning occurs through exploration of new information and meaning is garnered through connection of the new information to previous knowledge and experience.
- Learning is accomplished through the reflective, shared collaboration of inquiry in work groups.
- As opposed to traditional learning, understanding of the concepts is gained through inquiry and discovery as they develop applications.
- Reflection and self-assessment are used to solidify the learning and connect new information to previous knowledge and experience. The process continues throughout the entire learning experience.
- Learning takes place in authentic *real world* activities in order to provide for application of the information being learned.

- While traditional learning might produce similar outcomes for each student, constructivism produces outcomes that are different for each student based on the student's prior experience and knowledge in regards to his or her current learning.

These principles form the overarching themes of contemporary constructivist theory (Alesandrini & Larson, 2002).

More central to this study is critical constructivism, which "recognizes that the cognitive constructive activity of the individual learner occurs within, and is constrained by, a socio-cultural context" (Taylor et al., 1995, p. 2). This type of constructivism combines von Glasersfeld's radical contstructivist theory and Herbermas' critical social theory. In the radical constructivist framework, knowledge gained by the individual is a set of connections used to cope and navigate through the world. This set of connections cannot be accurately communicated to other individuals (Woods & Murphy, 2002). Habermas' contributions to the field of critical social theory include the conceptions of "practical and emancipatory interests" (Taylor et al., 1995, p. 2) that promote open discourse and social turn through "Communicative Action" (Houston & Campbell, 2001, p. 67) which allows for emphasis to be placed "on facilitating students' involvement in active negotiation with teacher and peers" (Taylor et al., 1995, p. 3).

## Autonomy and Empowerment

The ideas of autonomy and empowerment are ones that affect education in a way that provides motivation to the student. Roller (1999) notes that autonomy is the "perception of being in control" (p. 110). Beatty believes that "empowered individuals

create social change in ever-increasing spheres" (as cited in Kerka, 1996, p. 1). The premise is that students, given the control of their education and the power to make decisions, will be more involved in their education and, as a result, learn more, with a higher degree of success and take that change out into their own world.

## Sensation Seeking

Sensation Seeking theory is that of certain individuals being more prone to "traits of high energy, adventurousness, and risk-taking" (Davis, 1992, p. 74). The idea of sensation-seeking, or optimal level of stimulation (OLS) as first formulated by Wundt in 1873, was picked up later by Berlyne, Fiske and Maddi, Hebb, and others revived it (Zuckerman et al., 1978). It was these researchers that incorporated the idea of arousal into the construct. Stimuli can be sought from any number of sources, including the educational model. Students who seek out online education may desire new stimuli for their senses or they may want to avoid the stress of interaction in the traditional classroom.

## Success

Success in education is many times based on grades or some other form of assessment. Another means of looking at success is through the eyes of the learner. Does the student think he or she was successful in the learning experience? This study focused on grades to determine the success of the students given the standard nature of their assessment design.

Certainly one can find reasons and theories that explain failure or lack of success in on-line education courses and programs. On the institutional side these failures include:

- Weak institutional support
- Lack of organization
- Lack of understanding of on-line education
- Lack of program administration and process expertise
- Lack of Incentives for on-line education development
- Lack of internal policy support
- Lack of fiscal resources
- Lack of recognition as an on-line education provider (Distance Education Task Force [DETF], 1995b)

Many times, examining the concepts that support the success of programs and individuals in a program of study can detail areas in which to concentrate development. Successful programs typically have the following characteristics:

- A partnership between course design experts, content experts and technology experts;
- A well defined course development methodology;
- Subject matter content of sufficient quality to meet course and student objectives and needs;

- Adequate program administrative support, including systems for market research, promotion, registration, student service and support, course evaluation and timely revision;
- Smooth course delivery, with adequate technical support where applicable;
- Institutional support for the on-line education effort, including investment in expertise and learning time for developers, recognition, rewards for success, and senior faculty and administration recognition of credibility;
- Adequate startup and operational funding. (DETF, 1995a)

It is noted that these lists of program failures and successes, while collected in light of distance education, could also be applied to traditional educational models.

Distance learners are looking for particular items in a program of study as well. In a marketing study by DiPaolo (1999), distance learners were found to be looking for:

- Real-time and time-delayed options;
- Well-designed, engaging, and intellectually challenging courses;
- Seamless, available, and reliable delivery technology;
- Greater emphasis on learner-centered versus teacher-centered approaches;
- A high level of interaction including problem-based simulations;
- Modularized formats instead of courses demanding large chunks of time;
- Participation in a learning community through interaction with instructors and fellow students;
- Academic advising and student support services, which are convenient and easy to understand and access.

Another set of success factors to review are those of the individual student. There are many related lists of success factors and ideas for students to consider when choosing to proceed down the on-line education path of learning. There are several broad categories in which all of the factors seem to fall: Motivation, Learning Style, Discipline, Organization, Academic Skills, Technical Requirements, and Effective Communication. The table below illustrates the factors that fall into each of the categories:

Table 1

*Student Success Factors*

| Category | Source/Factor |
|---|---|
| Motivation | What makes a successful on-line student?<br>• Be self-motivated. |
| Learning Style | What makes a successful on-line student?<br>• Accept critical thinking and decision making as part of the learning process.<br>• Feel that high quality learning can take place without going to a traditional classroom.<br>How to succeed in distance learning courses<br>• Find some study-buddies. |

Table 1 (continued)

*Student Success Factors*

| Category | Source/Factor |
|---|---|
| Discipline | What makes a successful on-line student?<br>• Be self-disciplined.<br>How to succeed in distance learning courses<br>• Be realistic.<br>• Set interim goals and deadlines for yourself and stick to them.<br>• Avoid interruptions.<br>• Know where to study.<br>• Prepare for assignments and tests.<br>Tips for on-line success<br>• Take the program and yourself seriously.<br>• Make sure you have a private space where you can study.<br>• Log on to your course every single day.<br>• Apply what you learn. |
| Organization | What makes a successful on-line student?<br>• Be willing to commit to 4 to 15 hours per week per course. |

Table 1 (continued)

*Student Success Factors*

| Category | Source/Factor |
|---|---|
| Organization | How to succeed in distance learning courses<br>• Organize your goals in a study schedule.<br>• Evaluate your own progress regularly.<br>• Time your tests wisely. |
| Academic Skills | What makes a successful on-line student?<br>• Be able to meet the minimum requirements for the program.<br>How to succeed in distance learning courses<br>• Familiarize yourself with course design.<br>• Read all of the course syllabus.<br>• Identify the tools necessary to complete assignments. |
| Technical Requirements | What makes a successful on-line student?<br>• Have access to a computer and a modem.<br>How to succeed in distance learning courses<br>• Identify the tools necessary to complete assignments. |

Table 1 (continued)

*Student Success Factors*

| Category | Source/Factor |
|---|---|
| Effective Communication | What makes a successful on-line student?<br>• Be open minded about sharing as part of the learning process.<br>• Be able to communicate through writing.<br>• Be willing to speak up if problems arise.<br>• Be able to think ideas through before responding.<br>How to succeed in distance learning courses<br>• Stay in touch with your instructor.<br>• Use good communication skills.<br>• Find some study buddies.<br>• Discuss your progress.<br>Tips for on-line success<br>• Take full advantage of on-line conferencing.<br>• Participate.<br>• Take advantage of your anonymity.<br>• Be polite and respectful.<br>• Speak up if you are having a problem |

*Note.* Compilation of four sources: 1) What makes a successful online student? (Board of Trustees of the University of Illinois, 2000b); 2) How to succeed in distance learning courses (Solarek, 1997);

Table 1 (continued)

*Student Success Factors*

| Category | Source/Factor |
|---|---|
| 3) Tips for online success (Board of Trustees of the University of Illinois, 2000a); and 4) Are you a candidate for distance learning? (Categories) (Thomas, 1999) | |

## Summary of the Chapter

Between proper formulation of curriculum and review of student factors, the teacher has the opportunity to develop a first rate education through a format that meets the needs of individuals who do not have access to or choose not to pursue traditional education. With these tools in hand, the teacher is prepared to utilize his or her expertise to build a better curriculum. Additionally, an understanding of properly formulated curriculum incorporating the theories of constructivism, autonomy and empowerment, sensation seeking, and success, the instructional and learner variables can be used to predict course satisfaction and higher grades in on-line coursework.

# CHAPTER THREE

# METHOD

This chapter describes the methods utilized in the study. It discusses the development of a course satisfaction scale and the inclusion of learner measures. Variables examined were constructivism, autonomy and empowerment, sensation seeking, and success to determine the factors that indicate satisfaction and higher grades for the on-line education student.

## Selection of Participants

Participants of this study were individuals who had finished an on-line education course or courses with an assigned grade. Additionally, the participants were to have completed high school through a traditional program of study or through a General Education Degree equivalency. The courses that participants had taken to be considered in this study were postsecondary courses (graduate or undergraduate). On-line courses include courses completed wholly on the Internet, courses completed through a newsgroup or bulletin board system, or some other hybrid course that includes a significant on-line component.

The participants for this study were those individuals who had completed education at a distance and who chose to complete the research instrument. Participants were recruited from a variety of sources utilizing various marketing methods. These marketing methods included invitations to user groups through posted messages, personal invitations to acquaintances in the field, search engine listings, and letters to major

organizations in on-line education. There were 17 groups invited to participate in the study.

Participants were assured that all information collected in the instrument was confidential. The researcher had no possible way to access the name, e-mail address, computer name, login name, or server name, all of which could have been collected either overtly or covertly. Each subject was informed of this policy.

## Research Instruments

The instrument used in the study was a web-based form located on the Internet at http://www.fischerservices.com/dess-f/. The instrument was used to collect responses through checkboxes, radio buttons, pull-down menus, and submission fields. No information about identity or location of the participant was collected either overtly through direct questions or covertly through form submission via the Internet (e.g., computer name, etc.). The data inputted were collected in a database held on the website for use in various statistical tools (e.g., Microsoft Excel, SPSS, or another statistical software program). A full copy of the instrument is available in Appendix E of this paper. This tool was designed for this study to determine the attitudes and reactions of the participants on various aspects of on-line education, personal preferences, life situations, and the educational environment. Additionally, the instrument incorporates demographic information and portions of scales used in other studies. The survey packet included:

- Demographics Survey
- Constructivist Learning Environment Scale (CLES)
- Perception of Empowerment Instrument (PEI)

- Sensation Seeking Scale, Form V (SSS-V)
- Generalized Expectancy for Success Scale (GESS)
- Course Satisfaction Scale

Each of the scales adapted from other sources was used with permission. These scales are discussed at length below.

Several of the scales within the survey packet contained subscales. However, in order to increase overall reliability in this study, those subscales were not analyzed with regards to course satisfaction or grades in on-line coursework.

Demographics Survey

The research instrument included a survey of demographic information on the subject. The data collected included familial, occupational, socio-economic status, educational, musical, religious, and political information. The instrument used a variety of collection styles including radio buttons, text box (Age, Birth Month, and Birth Year), pull-down menus (Gender, Ethnic Group), and checkboxes. A set of questions from this survey is shown in Figure 6. Questions and their options are available in Appendix E.

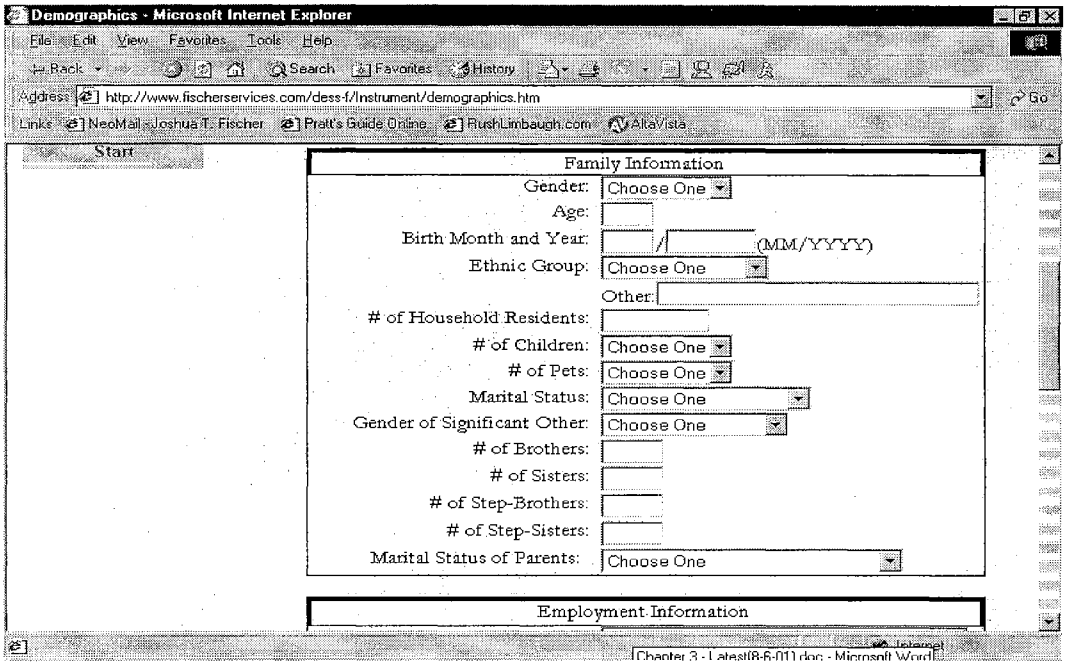



Figure 6: Sample Demographic Questions

Constructivist Learning Environment Scale (CLES)

Originally designed to measure the level of constructive principles within the content of the science curricula, the 30-item scale is designed to produce data in five areas with six items per area: personal relevance, student negotiation, shared control, critical voice, and uncertainty (Taylor, Watson, & Fraser, 1995). The scale was modified to non-specific content for this study.

The CLES was delivered to several large samples, including a 1600-subject sample in Dallas Public Schools in Dallas, Texas. In this sample, the scale reliabilities for personal relevance, student negotiation, shared control, and critical voice were greater than .80. The uncertainty scale reliability was .64. Similar results were found for a random sample of Australian students (Taylor, Fraser, & Fisher, 1997).

Research data were also utilized to verify the factor structure using factor analysis with a varimax rotation. The data confirmed the unique characteristics of each of the sub-scales within the CLES (Taylor et al., 1997).

Perception of Empowerment Scale (PEI)

Developed originally as a 27-item instrument by Roller (1995), the scale probed individuals on their perceptions of the concepts of autonomy, responsibility, and participation. Data from initial research were utilized in an exploratory factor analysis using a varimax rotation. Through this process, the scale was pared down to a 22-item instrument for use with a second phase of research. In the second phase, data from a second set of participants were used in a LISREL Analysis (VII). A .90 Goodness of Fit Index and Adjusted Goodness of Fit Index were used to delete items from the second version of the instrument (Roller).

Sensation Seeking Scale – Form V (SSS-V)

Originally designed to measure propensity to seek change for the purpose of maintaining arousal (Zuckerman et al., 1978), the Sensation Seeking Scale is now in its fifth form. Reasons for developing a Form V included:

- To examine the cross-cultural reliabilities of the factors of Form IV of the SSS, comparing the factor-analytical results from the original study (1971) with those from a large socially heterogeneous sample of an English population.

- To develop a shorter form of the SSS, based on the four factor analyses (Zuckerman et al., p. 140, 1978)

Subsequent to analysis of data using Form IV, Form V was created, reducing the number of items from 72 in Form IV to 40 in Form V. Based upon factor analyses of Form IV data, an attempt to take 10 items from each of four factors was made. The four factors were: Thrill and Adventure Seeking (TAS), Experience Seeking (ES), Disinhibition (Dis), and Boredom Susceptibility (BS). The criterion for acceptance was primary loading on the same factor above .30 in magnitude. In a few cases this criterion was not used where loadings did not all meet the criteria across samples for particular items. While the reliabilities of Form V was expected to be lower than Form IV due to length of the scale, the only substantial drop in reliability was in the ES scale (down to .6). (Zuckerman et al., 1978).

Generalized Expectancy for Success Scale (GESS)

This scale is based on the idea that an individual's expectancy for success contributes significantly towards achievement (Fibel & Hale, 1978). Originally, the scale was constructed of 150 items that reviewed the domains of "public, private, familial, interpersonal, and work-related" areas (Fibel & Hale, p. 925). No criteria for success were designated in the construction of the original 150 items. These items were then reviewed by three psychologists and pared down to 104 items, which were then administered to 100 participants. Upon item analysis of this sample data, 30 items were found to substantially correlate with the total score. These 30 items constitute the current

version of the GESS. Further samples were given the 30-item version of the scale (Fibel & Hale).

Results from 207 participants were factor analyzed using principal components analysis. Components with a 1.50 eigenvalue or greater were rotated orthogonally using Kaiser's varimax method. Four factors were noted through this analysis: 1) the individual's sense of general efficacy, 2) long-range career-oriented expectancies, 3) personal problem solving, and 4) an indeterminate factor. However, due to the small sample size in the original study and loadings of items on several factors, it is possible that one general factor is present (Fibel & Hale, 1978). Based on their summary conclusions, a one-factor solution was utilized in this research to analyze the data.

Test-retest reliability was found to be .83 overall. Additionally, the internal consistency was measured using two methods. Using the Spearman-Brown correction formula, a split-half reliability coefficient was calculated for odd versus even items. The findings were .90 for females and .91 for males. Correlation between the first 15 items and the last 15 items was calculated .82 for females and .83 for males (Fibel & Hale, 1978).

Course Satisfaction Scale

In developing the course satisfaction scale, the intention was to develop a concise scale that looked at the level of satisfaction of the subject with on-line education coursework. The design of the scale was developed around several concepts. The following figure (Figure 7) is a graphical representation of these underlying concepts:

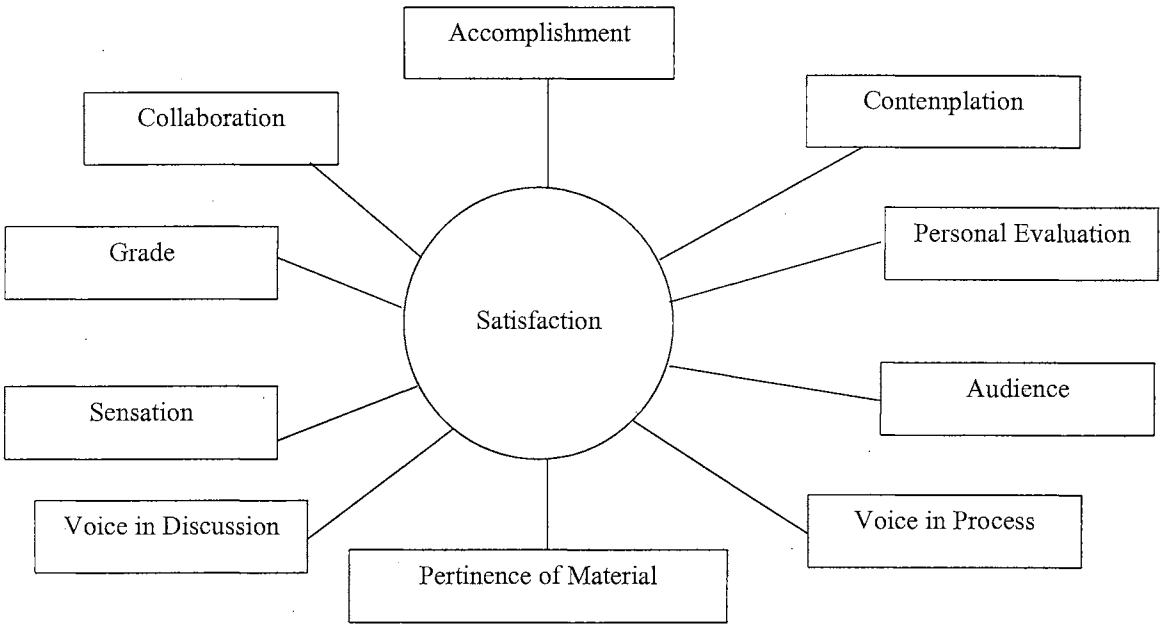



Figure 7: Conceptualization of Course Satisfaction

This scale was a new scale developed by the primary investigator for this research incorporating recommendations from Dr. Kay Bull and Dr. Diane Montgomery. The scale consisted of 11 questions. Ten of the questions were based on a five-point likert scale with the following options: 1 = Almost Never, 2 = Seldom, 3 = Sometimes, 4 = Often, and 5 = Almost Always. A final question was fill-in-the-blank, recording a response to the subject's expected number of courses to be taken at a distance. An analysis of the data gathered was performed in chapter four of this study. For a complete list of questions, see Appendix E.

## Research Procedures

Four primary methods were used to invite participants to be involved in the study. These were:

- An invitation through a posted message to a user group (newsgroup, listserv, or bulletin board)
- A personal invitation (to field acquaintances)
- An invitation to major DE institutions via e-mail, telephone call, or combination of the two.

For each of these entry routes there was a corresponding invitation and instruction set that assisted the subject in getting to the study website and completing the study instrument (see Appendix B).

Upon receiving instructions to get to the website, each subject was given the opportunity to review information about on-line education, the study, and the principal investigator. The student was also able to read information about the study's purpose (see Appendix C).

Once the subject had read the information and decided to participate, he or she proceeded to the Start button, which took them to the Click-Through Consent Form (see Appendix D), which was based on the consent form provided by the Oklahoma State University Institutional Review Board. The Click-Through Form included a place for the subject to specify that he or she agreed to be a part of the study and were old enough to consent and a place to assign themselves a username for the study.

The username was chosen by the subject and stored on the user's computer in the form of a cookie. A cookie is a computerized script placed on an individual's computer that is recognized by websites upon entrance to the site. This script allows additional functionality. In this study, the use of the cookie allowed for tracking of the subject

between the parts of the instrument and in the data analysis portion of the study. The subject had to have cookies enabled in his or her web browser in order for the forms to work effectively. Each time the subject completed a portion of the instrument, his or her username was collected with the information and stored in the secure data file for future analysis.

After completing the Click-Through Consent form, the subject proceeded to the demographics section of the study. Participants then proceeded through the instrument answering the questions according to their own experiences. A copy of the entire research instrument, and each of the learner measures, is included in Appendix E.

Upon submission of the form results, the data were stored in a file on the website until downloading for use in analysis. The participant, upon submission of the form, received a confirmation of data submission and a Thank You for their participation (see Appendix F).

No direct contact between researcher and participant took place except when participants e-mailed the researcher asking specific questions.

## Data Analysis

The design of this study included two general components. The first addresses the structure of a set of items assessing learner satisfaction with on-line courses. The structure is analyzed utilizing principal components analysis. The second aspect is the application of multiple correlation methods to study relationships. Each of these components was reviewed in light of the four research questions. The research questions are:

I. What are the dimensions of course satisfaction?

II. Do learner measures predict course satisfaction?

III. Does course satisfaction relate to higher grades?

IV. Do learner measures predict higher grades?

Further discussion of these research questions and how they were conceptualized follows.

What are the Dimensions of Course Satisfaction?

In order to answer this question, the newly developed scale for course satisfaction was factor analyzed using principle components analysis.

Do Learner Measures Predict Course Satisfaction?

Included in this portion of the study were results from each of the scales included in the study: Constructivist Learning Environment Scale, Perception of Empowerment Instrument, Sensation Seeking Scale, Generalized Expectancy for Success Scale, and the Course Satisfaction scale (see Figure 8).

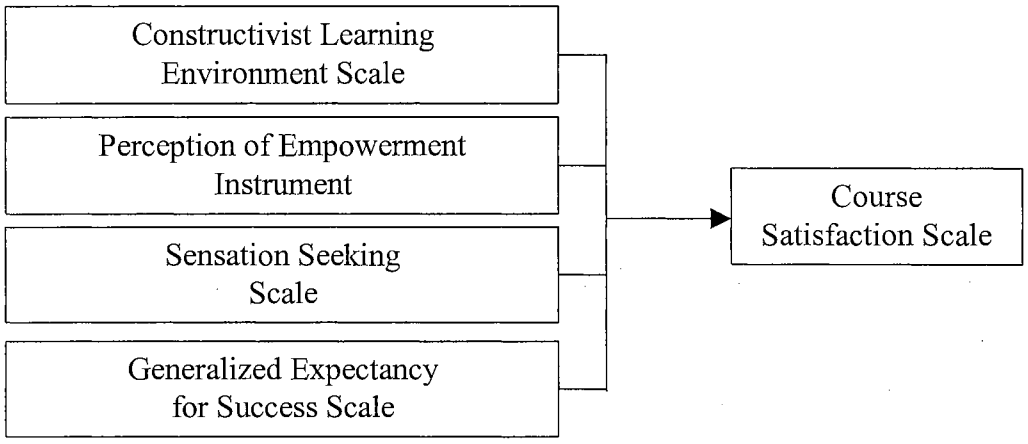



Figure 8: Conceptualization of Relationship Between Learner Measures and Course Satisfaction

Does Course Satisfaction Relate to Higher Grades?

In this question, an attempt was made to determine if there was a predictive relationship between a subject's score on the course satisfaction scale and his or her on-line education grade point average as given in the demographics survey (see Figure 9).


Figure 9: Conceptualization of Relationship Between Course Satisfaction and On-line Education Grades

Do Learner Measures Predict Higher Grades?

In this final research question, the scores on the learner measures were reviewed to determine if there was a predictive relationship between the learner measures and grades (see Figure 10).

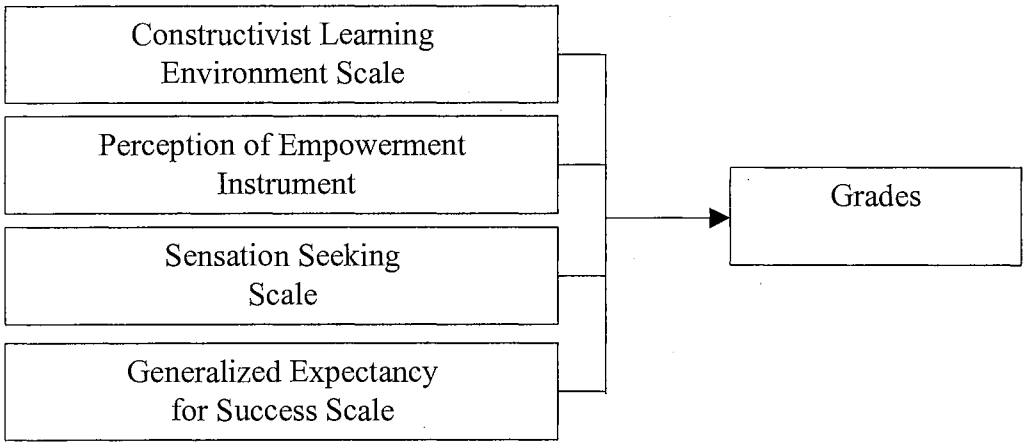



Figure 10: Conceptualization of Relationship Between Learner Measures and On-line Education Grades

Through collection of input from participants for each of the independent variables/ learner measures, raw data were gathered for appropriate analysis.

## Summary of Chapter

This chapter defined the methods used to respond to the problem defined in earlier chapters. Through the selection of participants, research instrument design, procedures, and overall study design, preparation for data gathering was made.

# CHAPTER FOUR

# FINDINGS

The purpose of this study was to identify variables that contribute to the course satisfaction of the distance learner and predict higher grades. The study utilized scales that were developed to measure the concepts of constructivism, empowerment, sensation seeking, and success. This chapter reports the characteristics of the learners who responded to the study solicitation and details the results of the study according to the research questions.

## Characteristics of Respondents

There were 17 groups specifically targeted for participation in this study. Of the 17 groups, five did not respond to the initial and subsequent contacts. Of those remaining 12 groups invited for the study, the following eight groups agreed to participate by soliciting their constituents:

- Texas A & M - Commerce
- University of North Texas
- Regent University
- Oklahoma State University
- Walden University
- University of Phoenix
- United States Distance Learning Association (USDLA)
- Distance Education Online Symposium – Listserv (DEOS-L)

Demographics were collected on each participant as they entered the research instrument. The total number of participants included in the study was 110. Following is a discussion of key items queried in the demographics section. For a complete list of questions from the demographics section, see Appendix E.

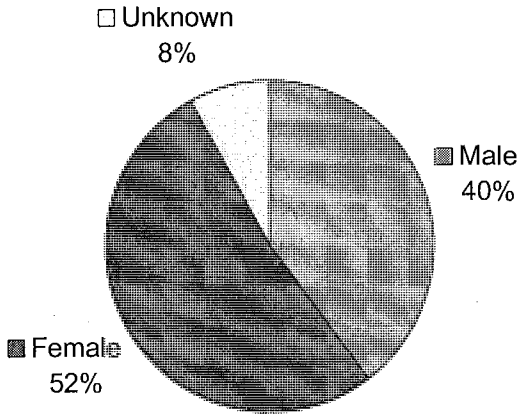



Figure 11: Respondent Gender

Figure 11 demonstrates that more females took part in the study than males. The unknown amount is due to participants not filling in the gender blank. This may be evidence suggesting that there are more females attending college than males (Mulrine, 2002).

Another area of interest was the ethnic characterization of the participants. In Figure 12, percentages are shown. The study reached a high percentage of Caucasians. The next largest ethnic group was African-American. The *Other* category includes both those not classified on the scale and those that chose not to respond to this question.

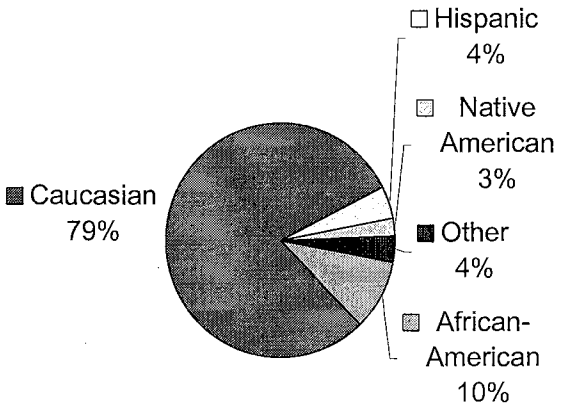



Figure 12: Respondent Ethnicity

Another issue recorded in the demographics section was that of socio-economic status (SES), which is reported in Figure 13 in terms of perceived SES. *Unknown* refers to responses left blank by the participant.

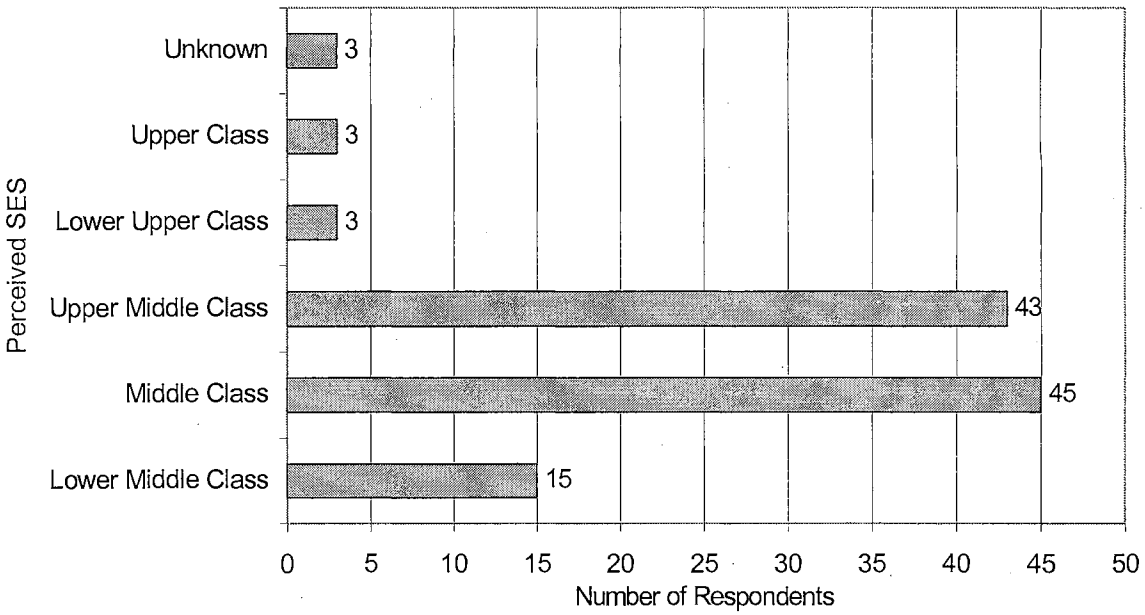



Figure 13: Perceived SES of Respondents

From this group of participants, data were collected to answer four research questions. These questions will be reviewed with the applicable data in the following sections.

## Missing Values and Outliers

While completing the study instrument, participants were not required to provide a response for each item of the instrument. Based on recommendations for Internet-based questionnaires (Bull, n.d.), responses to questions were optional. This allowed participants to skip those items that were objectionable to them or that they were unable to answer. Consequently, it allowed participants to provide responses to other questions to which they had no objections. As a result of the option to skip items, values were missing in the data.

Of the 113 total participants, there were 34 participants that had missing values. The number of values each participant was missing ranged from one to 30 values. Only six of the participants had more than three missing values. The one participant who had 30 missing values was removed completely from the data set. Participants had missing values on each of the learner measures and the demographics section. However, the course satisfaction scale had no missing values. The missing values were replaced by the averages of the items across the responses.

Due to extreme scores on at least one variable, two cases were identified as outliers. Both of these cases were eliminated due to the incredible values encountered and their potentially distorting effects on the distributions. One of these cases had no missing values. The other case removed had six missing values.

The final number of participants utilized in the analysis was $N = 110$.

## Research Questions

### What are the Dimensions of Course Satisfaction?

In order to answer this question, the items from the newly developed scale for Course Satisfaction were subjected to a principal components analysis. Due to the expected correlation among factors, an oblique strategy was utilized. The rotation method used was direct oblimin. Several factor structures were considered using multiple criteria. Of the structures considered, only one seemed theoretically feasible.

The first criterion used was the Cattell scree plot. In Figure 14, an examination of the scree plot led to the conclusion that a two-factor solution would be appropriate. As can be seen in Table 2, these two factors accounted for 45.45% of the total variance among items.

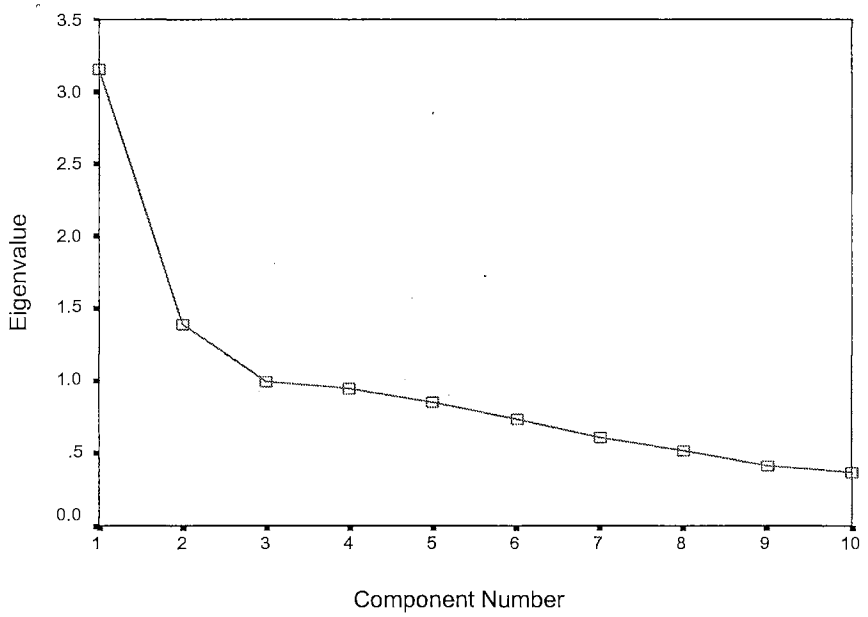



Figure 14: Cattell's Scree Plot for Course Satisfaction Structure

Table 2

*Total Factor -Variance of Course Satisfaction Scale Explained*

| Factor | Eigenvalue | Percent of Variance | Cumulative Percent of Factor Variance |
|---|---|---|---|
| 1 | 3.16 | 31.57 | 31.57 |
| 2 | 1.39 | 13.88 | 45.45 |
| 3 | 1.00 | 9.98 | 55.43 |
| 4 | .95 | 9.48 | 64.91 |
| 5 | .86 | 8.59 | 73.50 |
| 6 | .74 | 7.37 | 80.87 |
| 7 | .61 | 6.11 | 86.98 |
| 8 | .52 | 5.20 | 92.18 |
| 9 | .41 | 4.13 | 96.31 |
| 10 | .37 | 3.69 | 100.00 |

In this two-factor solution, the rotated structure matrix was reviewed to determine how the variables loaded on each factor. This information is contained in Table 3. The correlation between the factors was .30. The column labeled "$h^2$" is the communality between the two factors on the item. This shows the amount of variance the items share.

Table 3

*Two-Factor Structure Matrix for Course Satisfaction*

| Item | Factor 1 | Factor 2 | $h^2$ |
|---|---|---|---|
| 1 | .57 | .08 | .33 |
| 2 | .62 | .25 | .39 |
| 3 | -.07 | .71 | .60 |
| 4 | .78 | .24 | .61 |
| 5 | .45 | .27 | .23 |
| 6 | .40 | .71 | .55 |
| 7 | .33 | .68 | .48 |
| 8 | .57 | .52 | .46 |
| 9 | .28 | .66 | .44 |
| 10 | .68 | .14 | .46 |

The first factor's loading variables included Items 1, 2, 4, 5, 8, and 10. Each of the items loaded at .45 or greater. Through rounding, item 6 loaded on factor 1 at .4. Since the item loads much higher on factor 2 and does not seem a theoretical match with factor 1, it was not included.

The text for each item was, "I find that I am most satisfied with my on-line coursework:

1. when I have prepared a project that has a real audience."

2. when I have accomplished something important to me."

4. when I have had a say in the learning process (assignments, grading procedures, etc.)."

5. when I have worked collaboratively with a group."

8. when I have been involved in the grading procedure."

10. when the course material is pertinent to me."

The factor has been summarized and seems to relate to the concept of Focused Relevance. Participants were satisfied with DE coursework when focused by personal involvement in grading and collaboration (Items 4, 5, and 8) and when the coursework was relevant to the real audience and the student (Items 1, 2, 10).

The second factor in the rotated solution, as noted in Table 3, included items 3, 6, 7, 8, and 9. Each item loaded on the factor at .63 or greater. The text for each item was, "I find that I am most satisfied with my on-line coursework:

3. when I have made a high score or grade in the course."

6. when the course material and assignments are exciting."

7. when I have time to contemplate my responses."

8. when I have been involved in the grading procedure."

9. when I have a voice in the discussion of the class."

This factor seemed to be related to the student's Discerning Voice and Sensation. Participants are satisfied when they have the opportunity to have a contemplative voice in the responses and discussion (Items 7, 8, and 9) and when their senses are activated through high grades and exciting materials and assignments (Items 3 and 6).

The second criterion used for selection of the factors was that of Kaiser's rule (eigenvalues > 1). Table 2 shows that both factors discussed met this criterion. While this criterion frequently leads to the retention of too many factors, the examination of the scree plot and the theoretical feasibility of the factors retained directed the researcher to the two-factor solution.

Table 4

*Intercorrelation Between Satisfaction Scale Items*

| Item | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Participants (n = 110) | | | | | |
| 1 | --- | .31 | -.01 | .34 | .14 | .13 | .13 | .11 | .26 | .19 |
| 2 | .31 | --- | .11 | .33 | .13 | .25 | .28 | .26 | .12 | .33 |
| 3 | -.01 | .11 | --- | -.01 | .14 | .35 | .25 | .19 | .24 | -.04 |
| 4 | .34 | .33 | -.01 | --- | .29 | .24 | .25 | .54 | .22 | .35 |
| 5 | .14 | .13 | .14 | .29 | --- | .20 | .10 | .26 | .19 | .27 |
| 6 | .13 | .25 | .35 | .24 | .20 | --- | .41 | .32 | .36 | .38 |
| 7 | .13 | .28 | .25 | .25 | .10 | .41 | --- | .34 | .35 | .17 |
| 8 | .11 | .26 | .19 | .54 | .26 | .32 | .34 | --- | .32 | .25 |
| 9 | .26 | .12 | .24 | .22 | .19 | .36 | .35 | .32 | --- | .05 |
| 10 | .19 | .33 | -.04 | .35 | .27 | .38 | .17 | .25 | .05 | --- |

The correlation matrix shown in Table 4 shows some small correlations between items. However, the highest correlation, which was .54, was between items 4 and 8. Both of these items loaded on factor one and item 8 loaded on factor two as well.

Since this scale was created for this study, the internal reliability of each factor was calculated using Cronbach's alpha. The alpha for the first factor, Focused Relevance, was calculated at .66. The second factor, Discerning Voice and Sensation, had an alpha score of .69. As a result, less than 50% of the variance is explained.

Do Learner Measures Predict Course Satisfaction?

Included in this portion of the study were results from each of the scales in the study: Constructivist Learning Environment Scale, Perception of Empowerment, Sensation Seeking Scale, Generalized Expectancy for Success, and the Course Satisfaction Scale. Because there was a two-factor solution for the Course Satisfaction Scale, a regression with each factor was performed to determine the correlation between learner measures and the individual factors.

Table 5

*Forward Stepwise Regression of Learner Measures and Factor 1 (Focused Relevance)*

| Step | Variable | $R^2$ | $F_{eq}$ | $p_{eq}$ | $F_{inc}$ | $p_{inc}$ | $r^2_{zero}$ | $p_{zero}$ |
|---|---|---|---|---|---|---|---|---|
| 1 | CLES | .14 | 16.86 | .00 | 16.86 | .00 | .37 | .00 |
| 2 | GESS | .15 | 9.49 | .00 | 1.97 | .16 | .20 | .03 |
| 3 | SSS-V | .15 | 6.30 | .00 | .08 | .78 | .02 | .81 |
| 4 | PEI | .15 | 4.68 | .00 | .01 | .91 | .26 | .01 |

*Note.* eq = equation; inc = increment/change; zero = zero order correlation

Table 5 highlights the forward stepwise regression calculated. It is notable that $R^2$ for the equation is .15, accounting for 15 percent of the variance in the dependent variable of factor 1 (Focused Relevance ) of course satisfaction. This figure is significant ($p<.01$). Looking at the $F_{increment}$ and $p_{increment}$ columns in Table 4, however, shows that after the

addition of the first variable (Constructivist Learning Environment Scale), there is no significant change in the model with addition of the rest of the variables. There are, however, significant correlations between factor 1 (Focused Relevance) of course satisfaction and three of the variables at the .05 level: Constructivist Learning Environment Scale, Generalized Expectancy for Success, and Perception of Empowerment Instrument.

Table 6

*Forward Stepwise Regression of Learner Measures and Factor 2 (Discerning Voice and Sensation)*

| Step | Variable | $R^2$ | $F_{eq}$ | $p_{eq}$ | $F_{inc}$ | $p_{inc}$ | $r^2_{zero}$ | $p_{zero}$ |
|---|---|---|---|---|---|---|---|---|
| 1 | CLES | .05 | 5.08 | .02 | 5.28 | .02 | .22 | .02 |
| 2 | SSS-V | .06 | 3.36 | .04 | 1.41 | .24 | -.08 | .39 |
| 3 | GESS | .06 | 2.26 | .09 | .13 | .72 | .08 | .41 |
| 4 | PEI | .06 | 1.68 | .16 | .00 | .98 | .16 | .10 |

*Note.* eq = equation; inc = increment/change; zero = zero order correlation

In reviewing the relationship between learner measures and factor 2 (Discerning Voice and Sensation) of the Course Satisfaction Scale, it was noted that a significant relationship did not exist (see Table 6). A significant relationship was found with the addition of the first variable, Constructivist Learning Environment Scale, at a .05 level. This was also the only variable that had a significant correlation at the zero-order level. However, at best, this only accounts for approximately five percent of the variance in factor 2.

After reviewing Tables 5 and 6, it can be noted that there is a relationship, though small, between Constructivist Learning Environment Scale and the Course Satisfaction factors 1 (Focused Relevance). This seems feasible as a component of course satisfaction. The relationship between Constructivist Learning Environment Scale and factor 2 (Discerning Voice and Sensation) is virtually non-existent.

Table 7

*Intercorrelations Between Learner Measures*

| Learner Measure | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| | | Participants (n = 110) | | |
| 1. CLES | --- | .74 | .13 | .22 |
| 2. PEI | .74 | --- | .08 | .08 |
| 3. SSS-V | .13 | .08 | --- | .03 |
| 4. GESS | .22 | .08 | .03 | --- |

Table 7 indicates the relationships between the learner measures. Of note is the relatively strong correlation between the Constructivist Learning Environment Scale and the Perception of Empowerment Instrument. Theoretically this is understandable given the constructs being measured in each.

On a related note, the Sensation Seeking Scale scores were checked for bivariate normality. The scores were found to be normal in this review.

Does Course Satisfaction Relate to Higher Grades?

In this question, an attempt was made to determine if there was a correlative relationship between a subject's total score on the Course Satisfaction scale (and its corresponding factors) and the participant's Distance Education Grade Point Average as given in the demographics survey.

The two variables, Focused Relevance and Distance Education Grade Point Average, have an $r^2$ value of .13. This value is not significant at the .05 level. Furthermore, a review of the Pearson correlation between Distance Education GPA and factor 2 (Discerning Voice and Sensation) reveals a low correlation (.05) with a lack of significance.

Additionally, the two factors were regressed with Distance Education GPA using a forward stepwise model. $R^2$ was .02 for the model showing virtually no variance in the Distance Education GPA. There were no significant relationships found in the model.

Do Learner Measures Predict Higher Grades?

In this final research question, the scores on the learner measures were reviewed to determine if there was a relationship between the learner measures and grades. In order to answer this research question, a regression analysis was performed using the scale totals from each subject and the Distance Education Grade Point Average collected in the Demographics section of the instrument.

Table 8

*Forward Stepwise Regression of Learner Measures and Distance Education GPA*

| Step | Variable | $R^2$ | $F_{eq}$ | $p_{eq}$ | $F_{inc}$ | $p_{inc}$ | $r^2_{zero}$ | $p_{zero}$ |
|---|---|---|---|---|---|---|---|---|
| 1 | GESS | .03 | 3.44 | .07 | 3.44 | .07 | .18 | .07 |
| 2 | CLES | .03 | 1.86 | .16 | .30 | .59 | -.01 | .90 |
| 3 | PEI | .04 | 1.34 | .27 | .31 | .58 | .01 | .90 |
| 4 | SSS-V | .04 | 1.04 | .39 | .19 | .66 | .04 | .68 |

*Note.* eq = equation; inc = increment/change; zero = zero order correlation

As shown in Table 8, the $R^2$ was .04, accounting for roughly four percent of the variance in the dependent variable, Distance Education Grade Point Average. The model was not significant as a whole. Looking at the $F_{increment}$ and $p_{increment}$ columns, the addition of variables also showed no significance. The generalized expectancy for success came close to being a significant ($p < .05$) relationship. This seems theoretically feasible. There were no other significant correlations between Distance Education GPA and the variables.

## Summary of Chapter

Through a review of the subject demographics and an analysis of the data gathered from the instrument's scales, responses were made to the study's questions. This included a principal components analysis of the items of the course satisfaction scale and a study of the relationships between study variables.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to identify variables that contribute to the satisfaction of the distance learner and to predict higher grades. In an effort to find ways to predict satisfaction and higher grades in on-line coursework, a research instrument was designed that was composed of four learner measures (Constructivist Learning Environment Scale, Perception of Empowerment Inventory, Sensation Seeking Scale -- Form V, and Generalized Expectancy for Success Scale) and a newly developed Course Satisfaction Scale. Focused by the research questions, the data gathered through the survey packet were statistically analyzed. A summary discussion of the limitations of the study, research findings, conclusions to the study and implications of these findings are presented in this chapter.

## Limitations of the Study

There were several limiting factors in this study. These limitations ranged from the generalizability of the study to the inadequacies of the research instrument to the preconceptions of the researcher. The first inadequacy was that of the generalizability of the study. Because the focus of the study was on-line education instead of distance education in general, the conclusions are restricted to only those involved in on-line coursework. Furthermore, the study instrument did not recognize the field of the on-line courses taken. It is possible that students in certain fields would be less satisfied with their experiences in the on-line environment. Also, participants who had the ability to

successfully manipulate computers at this level may have affected the level of satisfaction with this format. Additionally, the preconceptions of the researcher may have limited the study through bias.

## Summary of Research Findings

There were four research questions that were used to focus the study. They are used here to assist in summarizing the results.

### What are the Dimensions of Course Satisfaction?

Principal components analysis revealed a two-factor solution in the Course Satisfaction Scale. The first factor was summarized and seemed to relate to Focused Relevance. It is focused by personal involvement in grading and collaboration. It is relevant to the real audience and the student. The correlations among items were not very strong, with scores ranging from .11 to .54. As a result, items may have been included in this factor that are not a statistical match.

The second factor was that of Discerning Voice and Sensation. The contemplative voice is in the responses and discussion. High grades and exciting materials and assignments elicit sensation. While the statistical relationship is not strong, the figures are a bit stronger than on the first factor. The scores had a slightly smaller range (.19 to .54) with more scores closer to the mean correlation score.

### Do Learner Measures Predict Course Satisfaction?

This question was reviewed in light of the two-factor structure determined in question 1. Learner measures were reviewed to determine any relationship that they held

with each of the factors of course satisfaction. A forward stepwise regression was used to look at the relationships between learner measures and each of the factors. A significant relationship was found with the addition of the first variable, Constructivist Learner Environment Scale (CLES), for both factors. For factor 1 with the addition of CLES, an $R^2$ value of .14 was obtained, which was significant at .01. With the addition of CLES to the model with factor 2, the $R^2$ value was .05, which was significant at .05. No significant changes were noted with the addition of other variables to the model.

In the model that included factor 1, Focused Relevance, there is a significant relationship. Furthermore, while only the addition of the CLES variable showed a significant increment in the regression, there were significant relationships between the individual variables and factor one. CLES, GESS, and PEI all had relationships that were significant at the .05 level. However, even at best, with the inclusion of the whole model, only 15% of the variance is explained. This would suggest that that while some of the variance is explained by the learner measures, with the majority being explained by the addition of the first variable, there are other variables and chance that account for the remaining 85% of the variance in factor 1.

For the model that included factor 2, there was a small relationship shown with the addition of the first variable that accounted for only five percent of the overall variance in factor 2. This suggests, then, that most of the variance was explained not by the learner measures but by chance and variables not defined in the study.

Does Course Satisfaction Relate to Higher Grades?

In this question, an attempt was made to determine if there was a relationship between a subject's score on the course satisfaction scale and their distance education grade point average. Correlations between each of the course satisfaction scale factors and distance education GPA were calculated as well as a forward stepwise regression including the two factors and distance education GPA. None of the values calculated revealed relationships of any real strength and none were significant.

Do Learner Measures Predict Higher Grades?

In this final research question, the scores on the learner measures were reviewed to determine if there was a relationship with distance education GPA. Once again a regression model was used to determine this relationship. As a whole, the model only showed about four percent of the variance in distance education GPA and this figure was not significant at the .05 level. As a result, it seems clear that the learner measures play a non-existent role in predicting grade point. Other variables, not accounted for in this study, account for this variance.

## Conclusions of Findings

Based upon the discussion of the findings, there are several overarching conclusions to be made from the study as focused by the research questions. Concerning the dimensions of course satisfaction, the findings of this research show that there are two factors: 1) Focused Relevance and 2) Discerning Voice and Sensation. It would seem

that there is more research needed to fully understand course satisfaction for the on-line student given that nearly 55% of the variance was unaccounted for by the factors.

Furthermore, the learner measures seem to be minor predictors of the factors of course satisfaction. There seems to be no relationship between these same learner measures and distance education grade point average. Course satisfaction factors do not show a high positive or negative correlation with distance education grade point average either.

## Recommendations

There are several recommendations that can be made based on these findings in relation to practice, theory, and further studies needed. Each is discussed below.

### Practice

Based on the results found, there are implications for the practice of distance education. The research instrument used in this study was extremely time- and item-intensive. Future instruments would probably garner more support if they were trimmed down considerably. One of the institutions invited for the study that declined to be involved made mention of changes needed to this effect.

There are several features that could enhance the data collection site. An added feature that might have fostered greater completion rates would be an active server page that graphed the scale's measure and the overall conclusions. Another feature that would assist in future research would be the development of a contact information form captured to a database for those willing to be involved in future research.

Of note are the results of the course satisfaction scale and its corresponding factors, as well as the relationship between the learner measures and these factors. It would seem from these results that use of constructivist principles in the DE model is appropriate to a certain extent.

Furthermore, in capsulizing the components of course satisfaction, students may be able to understand more about their own needs in this area. As this is accomplished, and an understanding of their learning styles and needs is gained, students become better prepared to seek education, regardless of the format. As more is learned by the student, both of their preferences and their intended programs of study, the information can become more helpful in predicting their level of satisfaction.

## Theory

The underlying theory of this study was constructivism. There is some support for use of this theory of education in the on-line environment based on the findings of this study. It would seem that constructivism plays some part in contributing to student satisfaction with on-line courses. Looking back at the model presented in Figure 8, the majority of the components were constructivist in nature (i.e., contemplation, personal evaluation, audience, voice in the process, pertinence of the material, voice in the discussion, and collaboration). Further development of the course satisfaction scale following this model would likely lend to a stronger understanding and a possible theoretical model of constructivist-based course satisfaction.

Based upon the findings of the course satisfaction scale data, two theoretical factors have been determined: Focused Relevance and Discerning Voice and Sensation.

These two factors both speak to the ways in which individuals are satisfied with their distance education courses. These two concepts may provide the basis for future theory development, or, upon further research, stand in their own right as theories of Focused Relevance in Course Satisfaction and Discerning Voice and Sensation in Course Satisfaction.

Research

There are several recommendations that can be made regarding future research. The first recommendation concerning research is for further development to be done on the course satisfaction scale. To this end additional items could be added to the scale that increase the items in the areas of perceived factor structures. In so doing, further conceptualization of the underpinnings of course satisfaction could be aided and results may be more definitive. With a larger sample and additional scale items, better clarity of structure could allow for additional understanding of the makeup of course satisfaction. To this end, one researcher suggested the addition of a qualitative section for the next version of the scale that would collect the participant's input on their perception of what satisfies them in a distance education course. Revisiting Figure 8, further development of the instrument should be guided by this theoretical structure. In so doing, additional information could be gathered with a higher coverage of the variance in satisfaction and removal of the error variance.

Another area of study would be a comparison of students on-line, distance education students in general, and traditional learners and their respective levels of course satisfaction. In such a study, the question of whether or not on-line student satisfaction,

general distance education student satisfaction, and traditional student satisfaction are the same or related could be determined.

Further study using the learner measures could also be done to compare this study's results with those in traditional settings.

Another area of related study would be to review the balance between student and teacher-directed learning. A study of this nature could be used to validate the more appropriate model.

Another issue of importance is that of the validity of consumer-oriented/student satisfaction construct in providing education. Research could be done to determine the strengths and weaknesses of this approach to education and determine if there is improved learning as a result of this approach.

## Summary of Chapter/Concluding Comments

This study reviewed items believed to predict course satisfaction and higher grades in distance education. While the study did not turn out as entirely expected, even the results that showed no significance are not without value. As Thomas Edison is credited with saying:

> Just because something doesn't do what you planned it to do doesn't mean it's useless.... Reverses should be an incentive to great accomplishment. Results? Why, man, I have gotten lots of results! If I find 10,000 ways something won't work, I haven't failed. I am not discouraged, because every wrong attempt discarded is just one more step forward.... There are no rules here, we're just trying to accomplish something. (as cited in Beals, 1996, p. 2)

The first thing learned was that there was a relationship, though small, between constructivism and the two course satisfaction factors (Focused Relevance and Discerning Voice and Sensation). The relationship between constructivism and Focused Relevance was stronger (14% of the variance covered) than the relationship between constructivism and Discerning Voice and Sensation (five percent of the variance covered).

It was also learned that Grade Point Average of on-line education students was not measured well by the Course Satisfaction Scale or by the learner measures. There is some debate as to whether grades are appropriate for a constructivist classroom and whether they are not based more on what the teacher thinks than what the student does (Bull & Fuqua, personal communication, June 5, 2002). However, it is possible that because the Course Satisfaction Scale and the learner measures did not predict GPA, grades are not an accurate measure of what the student has learned. If there were a direct relationship, there may be reason to suspect a model of education that is not primarily constructivist in nature.

In order to develop a strong, viable distance education model, research must continue. As results of the research grow stronger, the model can be developed, incorporating each new piece of the puzzle. With each new piece, programs can be designed that meet the educational needs found in each sector of the community.

# REFERENCES

Alesandrini, K., & Larson, L. (2002). Teachers bridge to constructivism. *The Clearing House, 75*(3), 118-121.

*The American heritage dictionary of the English language.* (1992). (Mindscape On-line edition). Novato, CA: Houghton Mifflin.

Applefield, J.M., Huber, R. L., & Moallem, M. (2000). Constructivism in theory and practice: Toward a better understanding (theory of learning). *High School Journal 84*(2), 35-53.

Beals, G. (1996). *Thomas Edison "quotes."* Retrieved April 22, 2002, from: http://www.thomasedison.com/edquote.com

Berlyne, D.E. (1960). *Conflict, arousal, and curiosity.* New York: McGraw-Hill.

The Board of Trustees of the University of Illinois. (2000a). *Tips for online success.* Retrieved September 20, 2000, from University of Illinois Web site: http://illinois.online.uillinois.edu/IONresources/tips.html

The Board of Trustees of the University of Illinois. (2000b). *What makes a successful online student?* Retrieved September 20, 2000, from University of Illinois Web site: http://illinois.online.uillinois.edu/ IONresources/onlineoverview/StudentProfile.html

Boettcher, J.V. (1998). Let's boldly go . . . to the education holodeck. *Syllabus 11(10),* 18-22.

Bull, K.S. (n.d.). *Quantitative research on the Internet.* Retrieved November 8, 2001, from Oklahoma State University Web site: http://home.okstate.edu/homepages.nsf/toc/paperquantmeth

Carnevale, D. (1999, December 02). On-line courses of 1,000 students will become common, industry group says. *The Chronicle of Higher Education: Distance Education*. Retrieved September 15, 2000, from: http://chronicle.com/free/99/12/99120201u.htm

Charp, S. (2002). Changes to traditional teaching. *THE Journal 29*(10), 10-12.

Chrenka, L. (2001). Constructivism and the role of the teacher: Misconstructing constructivism. *Phi Delta Kappan, 82*(9), 694-695.

Clark, R.E. (1983). Reconsidering research on learning from media. *Review of Educational Research, 53*(4), 445-459.

Cooper, P.A. (1993). Paradigm shifts in designed instruction: From behaviorism to cognitivism to constructivism. *Educational Technology, 33*(5), 12-19.

Davis, G.A. (1992). *Creativity is Forever* (3rd ed.). Dubuque, IA: Kendall/Hunt.

DiPaolo, A. (1999). What distance students want. *Peterson's LifeLongLearning.com.* Retrieved September 16, 2000, from: http://www.lifelonglearning.com/distancelearnwant12.html

Distance education task force. (1995a, April). *Chapter 5.* Retrieved April 15, 2002, from http://is.dal.ca/~dewww/de5.html

Distance education task force. (1995b, April). *Chapter 6.* Retrieved April 15, 2002, from: http://is.dal.ca/~dewww/de6.html

Dorsey, J.M. (2001, March 12). Going mobile. *Wall Street Journal*. Retrieved March 20, 2001, from: http://www.avucs.com/WSJ_com%20-%20Going%20Mobile.htm

Duffy, T.M., & Jonassen, D.H. (Eds.). (1992). *Constructivism and the technology of instruction: A conversation*. Hillsdale, NJ: Lawrence Erlbaum.

Fibel, B., & Hale, W.D. (1978). The generalized expectancy for success scale – a new measure. *Journal of Consulting and Clinical Psychology, 46* (5), 924-931.

Galusha, J.M. (1997, December). Barriers to learning in distance education. *Interpersonal computing and technology: An electronic journal for the 21st century, V. 5, 3-4 pp. 6-14*. Retrieved September 20, 2000, from: http://jan.ucc.nau.edu/~ipct-j/1997/n4/galusha.html

Giroux, H.A. (1988). *Teachers as intellectuals: Toward a critical pedagogy of learning*. New York: Bergin & Garvey.

Greenhalgh, P. (1994). *Emotional growth and learning*. New York: Routledge.

Hammon, D.L., & Albiston, S.K. (1998). *Completing graduate school long distance*. Thousand Oaks, CA: Sage.

Hebb, D.O. (1955). Drives and the CNS (conceptual nervous system). *Psychological Review, 62,* 243-254.

Henderson, J.G., & Hawthorne, R.D. (1995). *Transformative curriculum leadership*. Englewood Cliffs, NJ: Prentice-Hall.

Holmberg, B. (1989). *Theory and practice of distance education*. New York: Routledge.

Houston, S. & Campbell, J. (2001). Using critical social theory to develop a conceptual framework for comparative social work. *International Journal of Social Welfare, 10*, 66-73.

International Data Corporation. (1999). *Number of remote students growing by 33% annually to reach 2.2 million in 2002.* Retrieved April 10, 2000, from: http://www.idc.com/Data/Consumer/ content/CSB020999PR.htm

Jofili, S. Geraldo, A., & Watts, M. (1999). A course for critical constructivism through action research: A case study from biology. *Research in Science & Technological Education, 17*(1), 5-17.

Kerka, S. (1996). *Adult education: Social change or status Quo?* East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED402472).

Landau, S.I. (1988). *Chambers English dictionary.* (7th ed.) New York: Cambridge University Press.

Mulrine, A. (2002, February). Are boys the weaker sex? *Reader's Digest, 2,* 110-115.

National Center for Education Statistics. (1998, February). *Distance education in higher education institutions: Incidence, audiences, and plans to expand.* (NCES 98-132). Retrieved April 11, 2000, from: http://nces.ed.gov/pubs98/98132.html

O'Loughlin, M. (1997). *Reinstating emotion in educational thinking.* Retrieved April 27, 2002, from University of Illinois at Urbana-Champaign Web site: http://www.ed.uiuc.edu/eps/pes-yearbook/97_docs/oloughlin.html

Olsen, D.G. (1999). Constructivist principles of learning and teaching methods. *Education, 120*(2), 347-355.

Perley, J. (1999, September/October). Back to the future of education: Real teaching, real learning. *Commentary*. Retrieved April 10, 2000, from: http://horizon.unc.edu/TS/commentary/1999-09.asp

Perraton, H. (1988). A theory for distance education. In D. Stewart, D. Keegan, & B. Holmberg (Eds.), *Distance education: International perspectives* (pp. 34-45). New York: Routledge.

Powell, R., McGuire, S., & Crawford, G. (1999). Convergence of student types: Issues for distance education. In A. Tait & R. Mills (Eds.), *The convergence of distance and conventional education: Patterns of flexibility for the individual learner* (pp. 86-99). New York: Routledge.

Rewick, J. (2001, March 12). Off campus. *Wall Street Journal*. Retrieved March 20, 2001, from: http://www.avucs.com/misc/WSJ_com%20-20Off%20Campus.htm

Robotham, D. (1995). Self-directed learning: The ultimate learning style? *Journal of European Industrial Training 19*(7), 3-7.

Roller, W.K. (1995). *Measuring perceived empowerment in individual organizational members.* Doctoral Dissertation, Florida State University.

Roller, W.K. (1999). The perception of empowerment instrument (PEI). In E. Beich (Series Ed.) *The 1999 annual: Volume I, training.* (pp. 107 – 117). San Francisco: Jossey-Bass.

Silverman, L.K. (1993). *Counseling the gifted and talented.* Denver: Love.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2000). Teaching and learning at a distance: Foundations of distance education. Upper Saddle River, NJ: Merrill.

Solarek, D. (1997). *How to succeed in distance learning courses*. Retrieved April 15, 2002, from Terra Community College Web site: http://www.terra.cc.oh.us/detips.html

Stein, N.L., Leventhal, B., & Trabasso, T. (1990). *Psychological and biological approaches to emotion*. Hillsdale, NJ: Lawrence Erlbaum.

Taylor, P.C., Fraser, B.J., & Fisher, D.L. (1997). Monitoring constructivist classroom learning environments. *International Journal of Educational Research, 27*(4), 293-302.

Taylor, P.C., Dawson, V., & Fraser, B.J. (1995). A c*onstructivist perspective on monitoring classroom learning environments under transformation*. Princeton, NJ: Educational Testing Service (ETS) Test Collection Library (ERIC Document Reproduction Service No. TC800363).

Thomas, C. (1999). Are you a candidate for distance learning? It takes more than a modem. *Peterson's LifeLongLearning.com*. Retrieved September 16, 2000, from: http://www.lifelonglearning.com/distancelearncandidate2.html

VanTassel-Baska, J. (1994). *Comprehensive curriculum for gifted learners*. Boston: Allyn and Bacon.

VanTassel-Baska, J. (1992). *Planning effective curriculum for gifted learners*. Denver: Love.

Vermette, P., Foote, C., Bird, C., Mesibov, D., Harris-Ewing, S., & Battaglia, C. (2001). Understanding constructivism(s): A primer for parents and school board members. *Education, 122*(1), 87-93.

Woods, B.S. & Murphy, P. K. (2002). Thickening the discussion: Inspecting constructivist theories of knowledge through a Jamesian lens. *Educational Theory, 52*(1), 43-59.

Zuckerman, M. (2000). Are you a risk taker? *Psychology Today, 33*(6), 52-87.

Zuckerman, M. (1979). *Sensation seeking: Beyond the optimal level of arousal.* Hillsdale, NJ: Lawrence Erlbaum.

Zuckerman, M., Eysenck, S., & Eysenck, H.J. (1978). Sensation seeking in England and America: Cross-cultural, age, and sex comparisons. *Journal of Consulting and Clinical Psychology, 46* (1), 139-149.

# APPENDICES

# APPENDIX A--INSTITUTIONAL REVIEW BOARD REVIEW FORM

**Oklahoma State University**
**Institutional Review Board**

Protocol Expires: 10/31/02

Date: Thursday, November 01, 2001 IRB Application No ED0238

Proposal Title: INSTRUCTIONAL AND LEARNER VARIABLES THAT PREDICT SATISFACTION AND HIGHER GRADES IN ONLINE COURSEWORK

Principal Investigator(s):

Joshua T. Fischer
4312 Boca Raton Dr.
The Colony, TX 75056

Diane Montgomery
424 Willard
Stillwater, OK 74078

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

---

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson

Carol Olson, Chair
Institutional Review Board

# APPENDIX B--INVITATION SCRIPTS

Depending on the type of contact, a specific script was chosen to discuss the study with potential participants. The following are those that were utilized.

Invitation to a Program Director

Hello, my name is Joshua Fischer. I am a Ph.D. candidate at Oklahoma State University in the College of Education's School of Applied Health and Educational Psychology.

I am currently working on a dissertation study entitled, " Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." I would like to invite, or have your faculty invite, students that have completed coursework in your online program to be involved in the study. In order to be a part of the study, subjects must have completed and been assigned a grade in an online course that is at a post-high school level.

For more information on the study, please feel free to visit the study's website at:

www.fischerservices.com/dess-f/

If, after reading more about the study on the website, you are interested in having individuals participate in the study, please direct them to the "start" button on the website. This will lead them through the study's data collection procedure.

Invitation to Faculty

Hello, my name is Joshua Fischer. I am a Ph.D. candidate at Oklahoma State University in the College of Education's School of Applied Health and Educational Psychology.

I am currently working on a dissertation study entitled, " Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." I would like to invite your students that have completed coursework in your online program to be involved in the study. In order to be a part of the study, subjects must have completed and been assigned a grade in an online course that is at a post-high school level.

For more information on the study, please feel free to visit the study's website at:

www.fischerservices.com/dess-f/

If, after reading more about the study on the website, you are interested in having individuals participate in the study, please direct them to the "start" button on the website. This will lead them through the study's data collection procedure.

Invitation to Prospective Subjects Posted to a Listserv, Bulletin Board, or Website

Hello, my name is Joshua Fischer. I am a Ph.D. candidate at Oklahoma State University in the College of Education's School of Applied Health and Educational Psychology.

I am currently working on a dissertation study entitled, " Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." I would like to invite you to be involved in the study. In order to be a part of the study, subjects

must have completed and been assigned a grade in an online course that is at a post-high school level.

For more information on the study, please feel free to visit the study's website at:

www.fischerservices.com/dess-f/

If, after reading more about the study on the website, you are interested in having individuals participate in the study, please direct them to the "start" button on the website. This will lead them through the study's data collection procedure.

Invitation to Personal Students

As most of you know, I am a Ph.D. candidate at Oklahoma State University in the College of Education's School of Applied Health and Educational Psychology.

I am currently working on a dissertation study entitled, " Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." I would like to invite you to be involved in the study. In order to be a part of the study, subjects must have completed and been assigned a grade in an online course that is at a post-high school level.

For more information on the study, please feel free to visit the study's website at:

www.fischerservices.com/dess-f/

If, after reading more about the study on the website, you are interested in participating in the study, please go to the "start" button on the website. This will lead you through the study's data collection procedure.

Invitation to Acquaintances in the Field

As most of you know, I am a Ph.D. candidate at Oklahoma State University in the College of Education's School of Applied Health and Educational Psychology.

I am currently working on a dissertation study entitled, " Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." I would like to invite you to be involved in the study by sending individuals that you know who have taken a course through an online format of distance education to the study site. In order to be a part of the study, subjects must have completed and been assigned a grade in an online course that is at a post-high school level.

For more information on the study, please feel free to visit the study's website at:

www.fischerservices.com/dess-f/

If, after reading more about the study on the website, you are interested in helping out in the study, please have your contacts go to the study's site and read the same information that you have. If they are interested in participating, they proceed to the "start" button on the website. This will lead them through the study's data collection procedure.

APPENDIX C--STUDY WEBSITE PAGES

Before participants completed the study, they were given the opportunity to learn more about the primary investigator, distance education, the study, and review the approval letter from the Institutional Review Board. This information is included below.

Home Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Bio

Distance Education

Study Explanation

IRB Paperwork

Start

This website was established in order to collect information on the characteristics of distance and open learning students. The study is part of a research project entitled, "Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." The research is being conducted for a dissertation in the School of Applied Health & Educational Psychology, College of Education at Oklahoma State University.

Please feel free to peruse the links for background information on distance education, bio, the study and its rationale, IRB paperwork, and of course, to take the actual survey instrument itself.

These pages are best viewed with Internet Explorer. In particular, the survey instrument may not function correctly if not completed within IE.


jfischer@fischerservices.com

Bio Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Bio

Distance Education

Study Explanation

IRB Paperwork

Start

**Name:** Joshua T. Fischer
**Education:** B.A. Pastoral Care, ORU 1994
M.A. Educational Administration, ORU 1996
Ph.D. Candidate, Applied Health & Educ Psych, OSU
**Research Topic:** Instructional and Learner Variables that Predict Satisfaction and Higher Grades in On-line Coursework
**Vitae:** www.fischerservices.com/vitaejf.htm
**Occupation:** Education and Training

Mr. Fischer is in his last year of Ph.D. work at Oklahoma State University in the School of Applied Health & Educational Psychology of the College of Education. The degree has concentration areas in curriculum, adult and distance education, gifted and talented education, and research. This survey will collect the raw data used to formulate the substance of his dissertation.

Additionally, Mr. Fischer consults in the areas of adult and distance education, gifted and talented education, curriculum development, and web development.

Mr. Fischer's hobbies include: Basketball, Paintball, Running, Biking, Reading, Movies, and Cards.

Mr. Fischer currently lives with his wife and two daughters in The Colony, a suburb of Dallas, Texas.


jfischer@fischerservices.com

Distance Education Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Bio
Distance Education
Study Explanation
IRB Paperwork
Start

In Kogan Page's Open and Distance Learning Series, Barbara Hodgson's book, Key Terms and Issues in Open and Distance Learning, quotes Kaye in saying that,

> "Distance education, in contrast to traditional classroom or campus based education, is characterised by a clear separation in space and time of the majority of teaching and learning activities."

Another key term that is associated with distance education is open learning. Hodgson explains the two terms this way:

> "Open learning is an educational philosophy; distance learning is an educational delivery system to meet *particular needs.*" (Italics mine)

Distance education is a vast field that has been both lauded and criticized in the education field. Some educators believe it to be the salvation to system, while others view it simply as a side show attraction, while still others believe (admittedly) that its purpose is to generate cash-flow. The true value, however, lies not in its monetary value to the school offering it, but to the students it reaches that might otherwise be left behind. Distance education removes some of the barriers that traditional education has unfortunately been unable or unwilling to remove.

Examples of distance education range from paper and pencil correspondence to video courses to web based courses to other hybrid versions.

The means used simply fall into the category that separate a student from the teacher in some form or fashion.

The beauty and hope of distance education is that it creates an educational paradox. . .*through distance, a unity is developed between an otherwise non-student and a teacher.*

For additional information on distance education, please check out the links below:

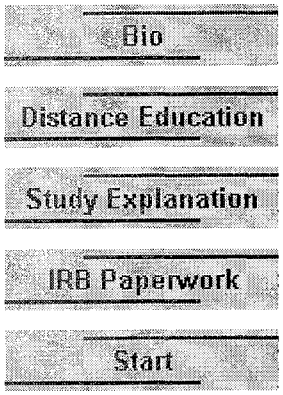
- American Distance Education Consortium
- International Centre for Distance Learning
- American Center for the Study of Distance Education


jfischer@fischerservices.com

Study Explanation Page

# DESS-F

Distance Education Success & Satisfaction - Factors




> "distance learning is an educational delivery system to meet *particular needs.*" (Italics mine)

Due to the increase in technology and the rapid increase in knowledge in today's society, education is a must for the individual seeking to gain access to better employment. Unfortunately, traditional education is not always obtainable for the individual and family already strapped financially and/or limited by time. As a result, distance education becomes a solution that meets the particular needs of the individual needing to take their career to the next level.

Distance education, for the sake of this study are courses taken in an online environment. Online environment can be defined as any electronic transfer of information using modem (cable, DSL, or other type) or other connection device to the internet or electronic bulletin board system for use in learning.

Additionally, this study is of students who have completed (a) distance education course(s). Students must have finished the course or courses in totality to be considered in the study. This study is not prescriptive in nature (yet). Therefore, it does little good for students who have not attempted distance education to take the survey.

The focus of this study is on the satisfaction level and continuance of distance learners in their program of study. The student attempting distance learning must be satisfied with their learning in

order to continue the process. Given the service-oriented nature of society, particularly in the United States, students may not continue taking DE courses if they are not satisfied with the instructional variables not ideal for them. Additionally, learner variables may come into play that may make them less likely a candidate for DE courses.

As a result, it is vital to learn about the issues that lend to the satisfaction and success of the student in a distance education program. The constructivist nature of the course, the student's perception of empowerment in the course, the level of sensation sought by the student, the student's expectancy for success, the student's grades, and their level of satisfaction all will be reviewed in order to gain a concept of what it is that makes the student successful in a distance education/on-line course.

The research collects information in the following areas: demographics, constructivism, empowerment, sensation seeking, success, and satisfaction. The data collected in the study will be used to paint a picture of some of the characteristics that satisfied and high achieving distance education students have looked like. The data will not be collected and matched to any individual. No information is collected overtly or covertly that could create the connection to any one person.

The study should take about 25 - 35 uninterrupted minutes. However, it is designed to allow the individual to take it in portions. After completing each stage, you are given the option to come back later to go on to the next stage

Additional questions may be directed to the e-mail address below.


jfischer@fischerservices.com

IRB Paperwork Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Bio
Distance Education
Study Explanation
IRB Paperwork
Start

The Institutional Review Board of Oklahoma State University will be the approving entity for this research.

If you would like to review the approval letter from the Board click here to download the PDF file. It is a three (3) MB file.


jfischer@fischerservices.com

Start Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Bio

Distance Education

Study Explanation

IRB Paperwork

Start

This study has six parts: Demographics, Empowerment, Constructivism, Sensation Seeking, Success, and Satisfaction. To be a part of this study do the following:

1. Make sure you have read the Study Rationale, have completed a distance education course, and are an adult;
2. Set a username below;
3. Click "Begin" below;
4. Read the Click through Consent Form;
5. Select the appropriate responses on the Consent Form;
6. Click "I CONSENT to being a part of this Study" on the Consent Form;
7. Continue through the Study forms marking your responses to each of the questions contained in the study;
8. Click the submit button at the bottom of each form that says, "I CONSENT to being a part of this study" to add your responses to the database.

**You may want to print this page for your reference.**

In order to track the data from one form to another, it is important to have a piece of information associated with each subject. In order to do this, we will use a web "cookie."

In the form below you will specify a web "cookie" to allow us to connect the data collected from each form into one record. This record will then accurately reflect your responses only.

The username that you specify should not identify you to the researcher in any way, but should be something that you will remember. By having the username, you can contact the researcher and ask to be removed by providing the username. The username should be a single word with no spaces in it. All ASCII characters should otherwise be fine.

*Note: If you have returned to remove your username*

*from the computer, select your username below and delete it. When the field is empty, then click "Set Username." This will remove your information from the computer.*

Once you have clicked "Set username," click "**Begin**" below to be transferred to the consent form.

**Enter A Username:**

Set Username

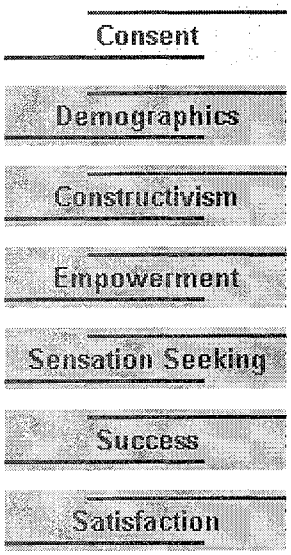
Begin


jfischer@fischerservices.com

APPENDIX D--CONSENT/CONFIDENTIALITY STATEMENT

# DESS-F

Distance Education Success & Satisfaction - Factors




This research is being completed as part of a dissertation study and is entitled, "Instructional and Learner Variables that Predict Satisfaction and Higher Grades in Online Coursework." The research is guided by Dr. Diane Montgomery, Dr. Kay Bull, Dr. Dale Fuqua, and Dr. Steve Harrist at Oklahoma State University's College of Education, School of Applied Health and Educational Psychology and by the primary investigator, Joshua T. Fischer, a Ph.D. candidate at OSU.

The purpose of this study is to identify the factors involved in determining the grades and ultimate number of courses to be taken at a distance. The questionnaire instrument should take approximately thirty (30) minutes to complete.

The questionnaire is designed in phases of varying length. Complete each phase and click "I Consent to being a part of this Study" to go on to the next phase. There are six (6) phases. The section entitled "Satisfaction" is experimental and is being developed to determine a student's satisfaction with their online learning experience.

The primary intended benefit of this study is to determine the relationship between the factors being studied (autonomy, constructivism, personal efficacy, sensation-seeking, distance education, and satisfaction) and the subject's grades and ultimate number of distance education courses taken. Provided there is a significant correlation within the study, the benefit of the study would be vast to those individuals and companies marketing to students taking distance education courses. Additional study may allow for a utility for

subjects to predict their likely grades and affinity for distance education courses.

Due to the manner of collection of the data, the subject is protected by the anonymity of the Internet. The questionnaire is housed entirely on the study's websites. As a result, personal contact between the subject and researcher will not take place in reference to completion of the questionnaire. Additionally, the data will be collected from a web-based form that will be specifically designed NOT to collect any information (name, e-mail, ID, PIN, address, computer name, IP address, etc.) that could be traced to an individual. Only the cookie, set by the subject, will be recorded, in addition to the responses.

> *Note: While there is virtually no means of accessing the information submitted by each respondent, the subject should return to the previous page (namely: http://www.fischerservices.com/dess-f/start.htm) to reset the cookie to blank, once the survey is completed. This will keep others from re-using your identifying cookie.*

For additional information please contact the appropriate party:

- Information about this study: Joshua T. Fischer
- Information about research subjects' rights:
  - Sharon Bacher, IRB Executive Secretary,
    Oklahoma State University,
    203 Whitehurst, Stillwater, OK 74078.
    Phone: 405-744-5700

In order to be a part of this study, you must be willing to accept the following statement:

> "I hereby authorize Joshua T. Fischer to collect the data I provide by completing this questionnaire over the Internet and to analyze this data. I understand that

participation is voluntary and that I will not be penalized if I choose not to participate. I also understand that I am free to withdraw from the study by not fully completing the questionnaire or by contacting the researcher with a proper username and asking to be removed from the study.

Furthermore, by choosing a "Yes" response below to the questions, I signify that I have read and understand this consent form, have read the Study Rationale, have taken at least one distance education course, and that I am an adult."

---

The choices below pertain to undefined

| | |
|---|---|
| Choose One | I have read and understand this consent form. |
| Choose One | I have read the Study Rationale. |
| Choose One | I have completed at least one distance education course. |
| Choose One | I am an adult at the time of the study and have legal authority to consent to this |

---

**Please make your selections above and print a copy of this form for your records.**

All Options should be marked "Yes" to be included in the study. If not marked "Yes," you will still be able to go through the questionnaire, however, your responses will be removed from the data set upon analysis.

(Click "Return to the Form" if the second part of this survey does not show up.)



jfischer@fischerservices.com

Options for Pull-down List Items

For each of the above, the options were: Yes, No, and Choose One.

APPENDIX E--RESEARCH INSTRUMENT

Each of the data collection instruments was a web-based form. The data were collected to a secure file held on a server in Upper New York State. Each of the collection forms are shown below. The list of options for each question is shown after the form in a section entitled: Options for Pull-down List Items.

Demographics Survey Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Demographics

Home
Bio
Distance Education
Study Explanation
IRB Paperwork
Start

Survey Status
Demographics
Constructivism
Empowerment
Sensation
Success
Satisfaction

**Instructions:** Select or type a response to each question. Each question is required (except for "Other" blanks). The form will not submit unless you select responses for each.

Welcome back undefined

If this isn't you, click here to set the computer to your username.

Family Information

Gender: Choose One

Age:

Birth Month and Year: / (MM/YYYY)

Ethnic Group: Choose One

Other:

# of Household

Residents:

# of Children: Choose One

# of Pets: Choose One

Marital Status: Choose One

Gender of Significant Other: Choose One

# of Brothers:

# of Sisters:

# of Step-Brothers:

# of Step-Sisters:

Marital Status of Parents: Choose One

## Employment Information

Occupational Field: Choose One

Yearly Salary: Choose One

Years of Work Experience: Choose One

Perceived Socio-Economic-Status : Choose One

## Educational Information

High School GPA: Choose One (on a 4.0 scale)

Distance Education GPA: Choose One (on a 4.0 scale)

Years Studying at a Distance: Choose One

# of Courses Taken:

# of Hours Taken:

Type of Distance Program: Select All the Apply

Other

Education Goal: Choose One

Highest Educational Level Achieved: Choose One

Will You Continue Taking DE Courses? Choose One

General Information

Favorite Musical Style: Choose One

Do You Play a Musical Instrument? Choose One

Favorite Sport: Choose One

Religious Preference: Choose One

Political Affiliation: Choose One

I CONSENT to being a part of this Study

Reset


jfischer@fischerservices.com

Options for Pull-down List Items

- Gender: Choose One; Male; Female
- Ethnic Group: Choose One; Caucasian; Hispanic; African-American; Asian-American; Indian-American; Native American; Other
- # of Children: Choose One; No Children; 1; 2; 3; 4; 5; 6; More than 6
- # of Pets: Choose One; 1; 2; 3; 4; 5; More than 5; No pets
- Marital Status: Choose One; Remarried; Divorced; Single - Never Married; Engaged; Married; Gay/Lesbian
- Gender of Significant Other: Choose One; No Significant Other; Male; Female
- Marital Status of Parents: Choose One; Married to each other; Separated; Divorced - remarried to each other; Divorced - Not remarried; Divorced - remarried; Never married
- Occupational Field: Choose One; Full-time Student; Human Resources; Advertising/Marketing/PR; Banking; Computers, Software; Accounting/Auditing; Agriculture, Forestry, & Fishing; Biotechnology and Pharmaceutical; Construction, Mining, and Trades; Employment Placement/Recruiting; Government and Policy; Internet/e-Commerce; Military; Restaurant and Food Service; Sports and Recreation; Administrative and Support Services; Arts, Entertainment, and Media; Computers, Hardware; Customer Service and Call Center; Finance/Economics; Healthcare, Practitioner, and Technician; Installation, Maintenance, and Repair; Legal; Personal Care and Service; Sales; Transportation and Warehousing; Education, Training, and Library; Hospitality/Tourism;

Insurance; Manufacturing and Production; Real Estate; Science; Architectural Services; Community, Social Services, and Nonprofit; Consulting Services; Engineering; Information Technology; Law Enforcement and Security; Retail/Wholesale; Telecommunications; Other

- Yearly Salary: Choose One; $0 - $15,000/year; $15,001 - $30,000/year; $30,001 - $45,000/year; $45,001 - $60,000/year; $60,001 - $85,000/year; $85,001 - $100,000/year; $100,001 - $130,000/year; $130,001 - $160,000/year; More than $160,000/year
- Years of Work Experience: Choose One; less than 1 year; 1 - 5 years; 6 - 10 years; 11 - 15 years; 16 - 20 years; 21 + years
- Perceived Socio-Economic Status: Choose One; Upper Upper Class; Upper Class; Lower Upper Class; Upper Middle Class; Middle Class; Lower Middle Class; Upper Lower Class; Lower Class; Lower Lower Class
- High School GPA: Choose One (on a 4.0 scale); 4.00 +; 3.50 - 3.99; 3.00 - 3.49; 2.50 - 2.99; 2.0 - 2.49; Below 2.0
- Distance Education GPA: Choose One (on a 4.0 scale); 4.00 +; 3.50 - 3.99; 3.00 - 3.49; 2.50 - 2.99; 2.0 - 2.49; Below 2.0
- Years Studying at a Distance: Choose One; < 1 Year; 1 Year; 2 Years; 3 - 5 Years; 6 - 9 Years; 10+ Years
- Type of Distance Program: Select All the Apply; Certificate (Personal Development); Associate's Degree; Bachelor's Degree; Master's Degree; Specialist's Degree; Doctoral Degree; Other

- Educational Goal: Choose One; Continuing education; Certificate; Associates Degree; Bachelor's Degree; Master's Degree; Post-Master's; Doctorate; Post-Doctorate; Specialist's Degree
- Highest Educational Level Achieved: Choose One; High School Diploma; Certificate; Associates Degree; Bachelor's Degree; Master's Degree; Doctorate; Specialist's Degree
- Will You Continue Taking DE Courses? Choose One; Yes; No
- Favorite Musical Style: Choose One; Country; Classical; Hip-Hop; Christian; Gospel; Rap; R & B; Heavy Metal; Easy Listening/Soft Rock; Jazz; New Age; Adult Contemporary; Alternative; Other
- Do You Play a Musical Instrument? Choose One; Yes; No
- Favorite Sport: Choose One; Basketball; Football (U.S.); Football (Int'l)/Soccer; Hockey; Polo; Volleyball; Golf; Baseball; Track & Field; Wrestling - Greco-Roman; Cycling; Other
- Religious Preference: Choose One; 7th Day Adventist; African Methodist Episcopal; Anglican; Assemblies of God; Baptist; Brethren; Buddhist; Catholic; Charismatic/Pentecostal; Christian Missionary Alliance; Christian Scientist; Church of Christ; Church of God-Holiness; Church of God in Christ; Congregational; Disciples of Christ; Eastern Orthodox; Episcopal; Foursquare Gospel; Full Gospel; Greek Orthodox; Hindu; Interdenominational; Islamic; Jehovah's Witness; Jewish; Lutheran; Mennonite; Methodist; Missionary; Mormon; Nazarene; Presbyterian; Quaker; Unitarian; Universalist; Vineyard;

Wesleyan; Agnostic; Athiest; No religious affiliation; Other

- Political Affiliation: Choose One; Republican; Democrat; Independent; Green Party; Libertarian; Reform Party; Other; Not registered to vote

- Constructivist Learning Environment Scale Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Home
Bio
Distance Education
Study Explanation
IRB Paperwork
Start

Survey Status
Demographics
Constructivism
Empowerment
Sensation
Success
Satisfaction

**Instructions:** for this set of questions, the following scale applies: Almost Always = 5; Often = 4; Sometimes = 3; Seldom = 2; Almost Never = 1. For each statement choose a response that most closely represents how you feel about your distance education courses

Welcome Back undefined

If this isn't you, click here to set the computer to your username.

## The World Around You

In this class. . .

Choose One 1. I learn about the world outside of school.

Choose One 2. My new learning starts with problems about the world outside of school.

Choose One 3. I learn how the subject matter can be part of my out-of-school life.

In this class. . .

Choose One 4. I get a better understanding of the world outside of school.

Choose One 5. I learn interesting things about the world outside of school.

Choose One 6. What I learn has nothing to do with my out-of school life.

## Learning

In this class. . .

Choose One 7. I learn that the subject matter cannot provide perfect answers to problems.

Choose One 8. I learn that the subject matter has changed over time.

Choose One 9. I learn that the subject matter is influenced by people's values and opinions.

In this class. . .

Choose One 10. I learn about different means used by people in other cultures to understand the subject matter.

Choose One 11. I learn that modern information is different from the information about the subject matter long ago.

Choose One 12. I learn that the subject matter is about inventing theories.

## Learning to Speak Out

In this class. . .

Choose One 13. It's OK for me to ask the teacher "why do I have to learn this?"

Choose One 14. It's OK for me to question the way I'm being taught.

Choose One 15. It's OK for me to complain about activities that are confusing.

In this class. . .

Choose One 16. It's OK for me to complain about anything that prevents me from learning.

Choose One 17. It's OK for me to express my opinion.

Choose One 18. It's OK for me to speak up for my rights.

## Learning to Learn

In this class. . .

Choose One 19. I help the teacher to plan what I'm going to learn.

Choose One 20. I help the teacher to decide how well I am learning.

Choose One 21. I help the teacher to decide which activities are best for me.

In this class. . .

Choose One 22. I help the teacher to decide how much time I spend on activities.

Choose One 23. I help the teacher to decide which activities I do.

Choose One 24. I help the teacher to assess my learning.

## Learning to Communicate

In this class. . .

Choose One — 25. I get the chance to talk to other students.

Choose One — 26. I talk with other students about how to solve problems.

Choose One — 27. I explain my ideas to other students.

In this class. . .

Choose One — 28. I ask other students to explain their ideas.

Choose One — 29. Other students ask me to explain my ideas.

Choose One — 30. Other students explain their ideas to me.

I CONSENT to being a part of this Study

Reset

Perception of Empowerment Instrument Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Home
Bio
Distance Education
Study Explanation
IRB Paperwork
Start

Survey Status
Demographics
Constructivism
Empowerment
Sensation
Success
Satisfaction

**Instructions:** for this set of questions, the following scale applies: Strongly Agree = 5; Agree = 4; Neutral = 3; Disagree = 2; Strongly Disagree = 1. For each statement choose a response that most closely represents how you feel about your distance education courses.

Welcome Back undefined
If this isn't you, click here to set the computer to your username.

Choose One 1. I have the freedom to decide how to complete my coursework.

Choose One 2. I am often involved when course changes are planned.

Choose One 3. I can be creative in finding solutions to problems within the course.

Choose One 4. I am involved in determining course goals.

Choose One 5. I am responsible for the results of my own decisions within the course.

Choose One 6. My input is solicited in planning changes.

Choose One 7. I take responsibility for what I do within the course.

Choose One 8. I am responsible for the outcomes of my actions within the course.

Choose One 9. I have a lot of autonomy in my courses.

Choose One 10. I am personally responsible for the work I do.

Choose One 11. I am involved in decisions that affect me within the course.

Choose One 12. I make my own decisions about how to do my work.

Choose One 13. I am my own "boss" most of the time.

Choose One 14. I am involved in creating our course vision for the future.

Choose One 15. My ideas and inputs are valued in the class.

I CONSENT to being a part of this Study

Reset


jfischer@fischerservices.com

Sensation Seeking Scale – Form V Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Home
Bio
Distance Education
Study Explanation
IRB Paperwork
Start

Survey Status
Demographics
Constructivism
Empowerment
Sensation
Success
Satisfaction

**Instructions:** Each of the items below contains two choices A and B. Please indicate which of the choices most describes your likes or the way your feel. In some cases you may find items in which both choices describe your likes or feelings. Please choose the one which better describes your likes or feelings. In some cases you may find items in which you do not like either choice. In these cases mark the choice you dislike the least. We are interested only in your likes or feelings, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers as in other kinds of tests. Be frank and give your honest appraisal of yourself.

Welcome Back undefined

If this isn't you, click here to set the computer to your username.

| | | |
|---|---|---|
| 1. | Choose One | A. I like "wild" uninhibited parties.<br>B. I prefer quiet parties with good conversation. |
| 2. | Choose One | A. There are some movies I enjoy seeing a second or even third time.<br>B. I can't stand watching a movie that I've seen before. |
| 3. | Choose One | A. I often wish I could be a mountain climber.<br>B. I can't understand people who risk their necks climbing mountains. |
| 4. | Choose One | A. I dislike all body odors.<br>B. I like some of the earthy body smells. |
| 5. | Choose One | A. I get bored seeing the same old faces.<br>B. I like the comfortable familiarity of everyday friends. |
| 6. | Choose One | A. I like to explore a strange city or section of town by myself, even if it means getting lost.<br>B. I prefer a guide when I am in a place I don't know well. |
| 7. | Choose One | A. I dislike people who do or say things just to shock or upset others.<br>B. When you can predict almost everything a person will do and say he or she |

| | |
|---|---|
| | must be a bore. |
| 8. Choose One | A. I usually don't enjoy a movie or play where I can predict what will happen in advance.<br>B. I don't mind watching a movie or play where I can predict what will happen in advance. |
| 9. Choose One | A. I have tried marijuana or would like to.<br>B. I would never smoke marijuana. |
| 10. Choose One | A. I would not like to try any drug which might produce strange and dangerous effects on me.<br>B. I would like to try some of the drugs that produce hallucinations. |
| 11. Choose One | A. A sensible person avoids activities that are dangerous.<br>B. I sometimes like to do things that are a little frightening. |
| 12. Choose One | A. I dislike "swingers" (people who are uninhibited and free about sex).<br>B. I enjoy the company of real "swingers." |
| 13. Choose One | A. I find that stimulants make me uncomfortable.<br>B. I often like to get high (drinking liquor or smoking marijuana). |
| 14. Choose One | A. I like to try new foods that I have never tasted before.<br>B. I order the dishes with which I am familiar so as to avoid disappointment and unpleasantness. |
| 15. Choose One | A. I enjoy looking at home movies, videos, or travel slides.<br>B. Looking at someone's home movies, videos, or travel slides bores me tremendously. |
| 16. Choose One | A. I would like to take up the sport of water skiing.<br>B. I would not like to take up water skiing. |
| 17. Choose One | A. I would like to try surfboard riding.<br>B. I would not like to try surfboard riding. |
| 18. Choose One | A. I would like to take off on a trip with no preplanned or definite routes, or timetable.<br>B. When I go on a trip I like to plan my route and timetable fairly carefully. |
| 19. Choose One | A. I prefer the "down to earth" kinds of people as friends.<br>B. I would like to make friends in some of the "far-out" groups like artists or "punks." |
| 20. Choose One | A. I would not like to learn to fly an airplane.<br>B. I would like to learn to fly an airplane. |
| 21. Choose One | A. I prefer the surface of the water to the depths.<br>B. I would like to go scuba diving. |
| 22. Choose One | A. I would like to meet some persons who are homosexual (men or women).<br>B. I stay away from anyone I suspect of being "gay" or "lesbian." |
| 23. Choose One | A. I would like to try parachute jumping.<br>B. I would never want to try jumping out of a plane, with or without a |

| | |
|---|---|
| | parachute. |
| 24. Choose One | A. I prefer friends who are excitingly unpredictable.<br>B. I prefer friends who are reliable and predictable. |
| 25. Choose One | A . I am not interested in experience for its own sake.<br>B. I like to have new and exciting experiences and sensations even if they are a little frightening, unconventional, or illegal. |
| 26. Choose One | A. The essence of good art is in its clarity, symmetry of form, and harmony of colors.<br>B. I often find beauty in the "clashing" colors and irregular forms of modern paintings. |
| 27. Choose One | A. I enjoy spending time in the familiar surroundings of home.<br>B. I get very restless if I have to stay around home for any length of time. |
| 28. Choose One | A. I like to dive off the high board.<br>B. I don't like the feeling I get standing on the high board (or I don't go near it at all). |
| 29. Choose One | A. I like to date persons who are physically exciting.<br>B. I like to date persons who share my values. |
| 30. Choose One | A. Heavy drinking usually ruins a party because some people get loud and boisterous.<br>B. Keeping the drinks full is the key to a good party. |
| 31. Choose One | A. The worst social sin is to be rude.<br>B. The worst social sin is to be a bore. |
| 32. Choose One | A. A person should have considerable sexual experience before marriage.<br>B. It's better if two married persons begin their sexual experience with each other. |
| 33. Choose One | A. Even if I had the money, I would not care to associate with flighty rich persons in the "jet set."<br>B. I could conceive of myself seeking pleasures around the world with the "jet set." |
| 34. Choose One | A. I like people who are sharp and witty even if they do sometimes insult others.<br>B. I dislike people who have their fun at the expense of hurting the feelings of others. |
| 35. Choose One | A. There is altogether too much portrayal of sex in movies.<br>B. I enjoy watching many of the "sexy" scenes in movies. |
| 36. Choose One | A. I feel best after taking a couple of drinks.<br>B. Something is wrong with people who need liquor to feel good. |
| 37. Choose One | A. People should dress according to some standard of taste, neatness, and style.<br>B. People should dress in individual ways even if the effects are some times strange. |
| 38. Choose One | A. Sailing long distances in small sailing crafts is foolhardy. |

| | |
|---|---|
| | B. I would like to sail a long distance in a small but seaworthy sailing craft. |
| 39. Choose One | A. I have no patience with dull or boring persons.<br>B. I find something interesting in almost every person I talk to. |
| 40. Choose One | A. Skiing down a high mountain slope is a good way to end up on crutches.<br>B. I think I would enjoy the sensations of skiing very fast down a high mountain slope. |

I CONSENT to being a part of this Study

Reset


jfischer@fischerservices.com

Options for Pull-down List Items

For each of the above questions, the options were: Choose One; A.; B.

Generalized Expectancy for Success Scale Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Home
Bio
Distance Education
Study Explanation
IRB Paperwork
Start

Survey Status
Demographics
Constructivism
Empowerment
Sensation
Success
Satisfaction

**Instructions**: This questionnaire is used to find out how people believe they will do in certain situations. Each item consists of a 5-point scale and a belief statement regarding one's expectations about events. Please indicate the degree to which you believe the statement would apply to you personally by selecting a response from the pull down menu to the left of each item. The responses range from 1 = highly improbably to 5 = highly probable. Give the answer that you truly believe best applies to you and not what you would like to be true or think others would like to hear. Answer the items carefully, but do not spend too much time on any one item. Be sure to find an answer for every item, even if the statement describes a situation you presently do not expect to encounter. Answer as if you were going to be in each situation. Also try to respond to each item independently when making a choice; do not be influence by your previous choices.

Welcome Back undefined

If this isn't you, click here to set the computer to your username.

**In the future I expect that I will:**

| | |
|---|---|
| Choose One | 1. find that people don't seem to understand what I am trying to say. |
| Choose One | 2. be discouraged about my ability to gain the respect of others. |
| Choose One | 3. be a good parent. |
| Choose One | 4. be unable to accomplish my goals. |
| Choose One | 5. have a successful marital relationship. |
| Choose One | 6. deal poorly with emergency situations. |
| Choose One | 7. find my efforts to change situations I don't like are ineffective. |
| Choose One | 8. not be very good at learning new skills. |

| | |
|---|---|
| Choose One | 9. carry through my responsibilities successfully. |
| Choose One | 10. discover that the good in life outweighs the bad. |
| Choose One | 11. handle unexpected problems successfully. |
| Choose One | 12. get the promotions I deserve. |
| Choose One | 13. succeed in the projects I undertake. |
| Choose One | 14. not make any significant contributions to society. |
| Choose One | 15. discover that my life is not getting much better. |
| Choose One | 16. be listened to when I speak. |
| Choose One | 17. discover that my plans don't work out too well. |
| Choose One | 18. find that no matter how hard I try, things just don't turn out the way I would like. |
| Choose One | 19. handle myself well in whatever situation I'm in. |
| Choose One | 20. be able to solve my own problems. |
| Choose One | 21. succeed at most things I try. |
| Choose One | 22. be successful in my endeavors in the long run. |
| Choose One | 23. be very successful working out my personal life. |
| Choose One | 24. experience many failures in my life. |
| Choose One | 25. make a good impression on people I meet for the first time. |
| Choose One | 26. attain the career goals I have set for myself. |
| Choose One | 27. have difficulty dealing with my superiors. |
| Choose One | 28. have problems working with others. |
| Choose One | 29. be a good judge of what it takes to get ahead. |
| Choose One | 30. achieve recognition in my profession. |

I CONSENT to being a part of this Study

Reset


jfischer@fischerservices.com

Options for Pull-down List Items

For each of the above questions, the options were: Choose One; 5 - Highly Probable;4 - Probable;3 - Neutral;2 - Improbable;1 - Highly Improbable

Course Satisfaction Scale Page

# DESS-F

Distance Education Success & Satisfaction - Factors

Home
Bio
Distance Education
Study Explanation
IRB Paperwork
Start

Survey Status
Demographics
Constructivism
Empowerment
Sensation
Success
Satisfaction

**Instructions:** Choose the response that most closely resembles how you feel about each statement. The scale used for each response is as follows: 1 = Almost Never; 2 = Seldom; 3 = Sometimes; 4 = Often; 5 = Almost Always.

Welcome Back undefined

If this isn't you, click here to set the computer to your username.

**I find that I am most satisfied with my online coursework:**

Choose One 1. when I have prepared a project that has a real audience.
Choose One 2. when I have accomplished something important to me.
Choose One 3. when I have made a high score or grade in the course.
Choose One 4. when I have had a say in the learning process (assignments, grading procedures, etc.)
Choose One 5. when I have worked collaboratively with a group.
Choose One 6. when the course material and assignments are exciting.
Choose One 7. when I have time to contemplate my responses.
Choose One 8. when I have been involved in the grading procedure.
Choose One 9. when I have a voice in the discussion of the class.
Choose One 10. when the course material is pertinent to me.

11. If distance education courses were satisfying to me, I believe I would take approximately _____ hours through a distance education format.

I CONSENT to being a part of this Study



jfischer@fischerservices.com

# APPENDIX F--CONFIRMATION FORM: THANK YOU NOTE

For each instrument completed by the participant, a Thank You note was reached upon submission of the form. In this note, they were given the opportunity to continue on through the instrument, complete the instrument at a later time, or discontinue the survey altogether. Below are the Thank You notes reached for each form and learner measure.

Consent Form Thank You

Thank you <username> for your willingness to complete this questionnaire and be a part of this study. Your contribution will assist distance educators and future students understand more about characteristics of online distance learners and the factors that contribute to their satisfaction and experience.

Click here to continue.

If you do not wish to complete this study, click here.

Demographics Survey Thank You

Thank you <username> for your willingness to complete this questionnaire and be a part of this study. Your contribution will assist distance educators and future students understand more about characteristics of online distance learners and the factors that contribute to their satisfaction and experience.

Click here to continue.

If you would like to continue at a later time, log into http://www.fischerservices.com/dess-f/constructivism.htm at your convenience.

If you do not wish to complete this study, click here.

Constructivist Learning Environment Scale Thank You

Thank you <username> for your willingness to complete this questionnaire and be a part of this study. Your contribution will assist distance educators and future students understand more about characteristics of online distance learners and the factors that contribute to their satisfaction and experience.

Click here to continue.

If you would like to continue at a later time, log into http://www.fischerservices.com/dess-f/empowerment.htm at your convenience.

If you do not wish to complete this study, click here.

Perception of Empowerment Instrument Thank You

Thank you <username> for your willingness to complete this questionnaire and be a part of this study. Your contribution will assist distance educators and future students understand more about characteristics of online distance learners and the factors that contribute to their satisfaction and experience.

Click here to continue.

If you would like to continue at a later time, log into http://www.fischerservices.com/dess-f/sensation_seeking.htm at your convenience.

If you do not wish to complete this study, click here.

Sensation Seeking Scale – Form V Thank You

Thank you <username> for your willingness to complete this questionnaire and be a part of this study. Your contribution will assist distance educators and future students understand more about characteristics of online distance learners and the factors that contribute to their satisfaction and experience.

Click here to continue.

If you would like to continue at a later time, log into http://www.fischerservices.com/dess-f/sensation_seeking.htm at your convenience.

If you do not wish to complete this study, click here.

Generalized Expectancy for Success Scale Thank You

Thank you <username> for your willingness to complete this questionnaire and be a part of this study. Your contribution will assist distance educators and future students understand more about characteristics of online distance learners and the factors that contribute to their satisfaction and experience.

Click here to continue.

If you would like to continue at a later time, log into http://www.fischerservices.com/dess-f/satisfaction.htm at your convenience.

If you do not wish to complete this study, click here.

Instrument Completion Thank You

Thank you <username> for taking the time to complete the DESS-F initial study. It is our hope that we are able to utilize this information to better serve distance education students and constituents.

Remember to go back to http://www.fischerservices.com/dess-f/start.htm to blank out your username.

VITA 2

Joshua T. Fischer

Candidate for the Degree of

Doctor of Philosophy

Dissertation: INSTRUCTIONAL AND LEARNER VARIABLES THAT PREDICT SATISFACTION AND HIGHER GRADES IN ON-LINE COURSEWORK

Major Field: Educational Psychology

Biographical:

Personal Data: Born in St. Cloud, Minnesota, January 27, 1972, son of Thomas and Colleen Fischer. Sibling to Kahlib and Christina Fischer. Husband to Christine. Father to Kelly and Katy.

Education: Graduated from Grace Fellowship Christian School, Tulsa, Oklahoma in May 1990; received Bachelor of Arts degree in Pastoral Care from Oral Roberts University, Tulsa, Oklahoma in May of 1994. Received Master of Arts degree with a major in Educational Administration at Oral Roberts University in May of 1996. Completed the requirements for the Doctorate of Philosophy with a major in Applied Behavioral Studies at Oklahoma State University in August 2002.

Experience: Raised on various Air Force Bases till the age of 12 and then in Broken Arrow, Oklahoma; employed in various positions within Oral Roberts University 1991 - 1998; consultant to distance education field 1999 to present; employed as faculty at University of Phoenix Online in the e-Education Masters Program 2001 to present.

Professional Memberships: Phi Kappa Phi