

IDENTIFYING MOTIVATIONAL STRATEGIES TO ENGAGE UNDERGRADUATE
LEARNING IN WEB-BASED INSTRUCTION

by

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A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Capella University

August 2010

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Abstract

Increased access to the Internet and online technologies has allowed a growing number of students to take part in college courses online. Participants in these courses tend not to be as motivated to engage in learning with the same thoroughness as they do in a classroom-based course. This study investigates strategies that are perceived as motivating to undergraduate college students in web-based learning environments.

A sample of 248 undergraduate college learners completed a survey to identify the instructional elements perceived as influential in supporting their motivation to engage and persist in learning in web-based courses.

Participants indicated a preference for well organized, professional looking courses with easy access to material. These attributes and the addition of visual elements such as graphics were responsible for capturing their attention and motivating them to engage and persist in course activities. Participants also stated that having an involved instructor in the course who values the student's position and offers feedback pertaining to performance and success encourages the students to persist in their course activities. Additionally, the participants distinguished the importance of understanding the relevance of the course materials as well as the application of the subject matter in real-world situations. Students indicated that they were less likely to begin and complete tasks that are seemingly impossible.

The perceptions of learners have an important message for instructional designers. Addressing the motivational needs of learners through course materials can enhance

students' ability to succeed through increased engagement and persistence in learning.

Designers of web-based instruction should consider the motivational needs of the

learners.

Dedication

I dedicate this work to my supporting wife Amy; without her, none of this would have been possible. Her support during the past seven years of this process was paramount, especially this past year. Now we move forward. I would also like to thank my parents for supporting my educational endeavors and planting this particular seed, it was your idea after all. I would like to thank my brother Clay and my nephew Garren (I just set higher expectations for you) for their supportive words. As well as the rest of our family and friends that were supportive through this process.

Acknowledgements

I would like to thank those who were directly involved in my dissertation process as my committee: Dr. Vernon Czelusniak (chair), Dr. Gary Rogers, and Dr. Wendy Zender. I would also like to thank all of the educators who contributed to my ultimate ability to complete my PhD. For those special teachers (John Abert, Terry Binion, Patty Rhodes, Rhonda Hayes, William “BJ” Johnson, and Patricia Burgess) who stretched my mind that much more - thank you. Dr. Bickford-Jordan, thank you for getting me started in the right direction and for your work in shaping my thoughts on this topic like no one else could have. You were a juggernaut.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

The use of the Internet as a way to extend post-secondary education opportunities to learners has grown with the development of online technologies. However, learners participating in online courses tend not to be motivated to engage in learning with the same rigor as in a classroom-based course (Huett, Kalinowski, Moller & Huett, 2008). The application of techniques to make online instruction motivating to learners is expected to help increase engagement in learning and achievement in online courses. This study sought to identify strategies that are perceived as motivating to post-secondary learners in an online learning environment.

The number of web-based post-secondary education courses offered continues to increase. The Internet, with its related technologies, has contributed to the increase of distance learning through electronic means commonly referred to as online learning, web-based learning, or e-learning (Bertrand-Hines, 2000; Collins-Brown, 2006; Keller, 2008; Saba, 2005). Web-based courses continue to grow in popularity (Hardy & Bower, 2004; Nelson, 2006; Omar, Bhutta & Kalulu, 2009; Yang & Cornelious, 2005), as seen through increasing enrollment (Palloff & Pratt, 2003). With the increasing numbers of online or web-based courses, efforts should be made to broaden the knowledge base of instructional designers in the design of online instruction.

One area for increasing the knowledge base is in motivational strategies. Research has proven that motivation can be a critical component to learning (Huett, 2006; Keller, 1983; Song & Keller, 2001). Identifying features that are perceived as motivating by undergraduate online learners will allow course designers to incorporate these features into the instruction to increase the engagement and persistence of learning for the learners involved (Bertrand-Hines, 2000; Margueratt, 2007; Scribner, 2007). Understanding the strategies that motivate learners and attending to those strategies in the instructional design process will likely lead to increased engagement and persistence in learning that take place in web-based environments (Margueratt, 2007; Scribner, 2007; Vafa, 2002). The strategies reflected in Scribner's survey tool are grades as motivators, content layout, course delivery strategies, and the role of the instructor and peers. Thoughtful, systematic design and development of motivational instruction can be used to reach diverse student populations and meet the needs of the students (Sun, 1997; Wiens, 2005).

The use of motivational elements and strategies in web-based courses offers opportunities to increase student engagement in learning. Research indicates a strong relationship between motivation, engagement and persistence in learning (Ally, 2004; Huett, 2006; Huett, Kalinowski et al., 2008; Keller, 1987b, 1983; Scribner, 2007). Huett, Kalinowski et al. (2008) reported a decreased rate of course withdrawal and failure with the use of motivational elements in web-based learning environments.

Research pertaining to learner motivation in a web-based learning environment has been limited and mainly focused on the learner attributes (Margueratt, 2007). Motivational factors contribute to the extent of attention learners dedicate to the material, and the amount of effort they invest in learning (Heinrich, Molenda, Russell & Smaldino,

1996; Keller 1987b; 1983). The purpose of this study was to identify motivational instructional strategies to engage undergraduate learners in web-based learning environments. The use of motivational strategies can be expected to increase learner engagement and success in online courses.

Background of the Study

Web-based courses are increasing in popularity. Post-secondary institutions continue to offer web-based courses, and web supplemented materials, as the popularity and demand increases (Hardy & Bower, 2004; Nelson, 2006; Yang & Cornelious, 2005). Institutional reasoning for entering into web-based courses offerings includes reaching new and wider audiences in new geographic regions while catering to adult learners, accommodating growth and increasing population without exorbitant spending on infrastructure, and establishing new markets across a larger geographic area for competitive purposes (Barfchin, 2006; Fazioli, 2009; Hathaway, 2009; Sperry, 2009). The growth rate for online enrollment is exceeding that of the higher education population overall (Allen & Seaman, 2008; Allen & Seaman, 2009; Hathaway, 2009).

Learner engagement in web-based courses can vary based on the individual's characteristics and circumstances. Researchers argue that motivating learners to succeed in web-based learning environments is a concern for instructional designers (Margueratt, 2007; Paas, Tuovinen, van Merriënboer & Darabi, 2005; Scribner, 2007). Fenrich (1997) found that learners must have motivation to learn and that "different media have different effects on motivation" (p. 113). Learners may perceive the instruction as not motivating because it does not gain their attention, appear relevant, build their confidence, or provide

a sense of achievement (Keller, 1983; Scribner, 2007). The motivational characteristics of individual learners will differ, as a result not all instruction will be motivating to all learners equally based on their individual, personal experiences (Blunt, 2006; Keller, 1999; Scribner, 2007).

A result of this study will provide instructional designers with an increased understanding of strategies that can be used to motivate undergraduate college students to engage and persist in learning in a web-based learning environment. The data collected during this study can be used to increase the potential that students will engage and persist in learning in web-based courses (Scribner, 2007).

Statement of the Problem

A major factor in engagement and persistence in learning in web-based courses is learner motivation. Motivation influences learning by determining which instructional goals learners address and which they choose to ignore as well as the effort they will put forth to reach certain goals (Keller 1987b). Historically, students in web-based courses are less successful than their traditional classroom-based counterparts (Archibong, 2007; Bolinger & Martindale, 2004; Diaz, 2000; Gunter, 2007; Henke & Russum, 2000; Liu, Gomez & Yen, 2009; Merena, 2006; ; Merisotis & Phipps, 1999; Omar et al., 2009; Patterson, 2007). Instructional designers need to consider strategies that appeal to the online learner's motivational needs and expectations (Margueratt, 2007; Scribner, 2007). Identifying the instructional elements that college students perceive as motivating in an

online learning environment will increase the potential for creating efficient, effective and attractive instruction (Balaban-Sali, 2008).

Purpose of the Study

The purpose of this study was to identify instructional strategies that undergraduate learners perceive to motivate them to engage and persist in learning through web-based instruction. This study is expected to provide information that will improve the abilities of instructional designers to create web-based instruction that undergraduate students will find motivating. The ability to define, categorize, and apply motivational instructional elements will aid in the application of the strategies specified by participants in designing future online instruction (Margueratt, 2007; Mayer, 2003; Merisotis & Phipps, 1999; Scribner, 2007).

This study is a replication of Scribner's 2007 doctoral study. Scribner's original study consisted of 202 high school students participating in a virtual high school program who were surveyed to identify what strategies they believed to be motivating. This study focused on a different population comprised of undergraduate college students in a college setting that provides course offerings in traditional and online formats.

Rationale

Identifying the motivational and instructional elements and strategies that college students prefer in an online learning environment will increase the potential for creating effective instruction for this group.

A study by Scribner (2007) identified and described motivational and instructional elements and strategies that high school students taking courses online perceive as supporting their motivation to engage and persist in learning. This dissertation replicated Scribner's study in a post-secondary, college environment to determine if the results varied. The participants in the study were representative of post-secondary adult learners enrolled in undergraduate studies who have enrolled in one or more web-based course.

People are motivated by different things based on their experiences (Keller 1987b; 1983; Margueratt, 2007). The learners enrolled in a post-secondary education program are of a wide range of ages and are likely to have life experiences that will give them characteristics that can influence instructional features that they will find to be motivating in online instruction (Keller 1987b; 1983; Margueratt, 2007). The life experiences of adult undergraduates are likely to be different from those of high school students (Scribner, 2007) and may reflect negatively on one instructional medium over another (Rodgers & Withrow-Thorton, 2005).

In addition, in contrast to Scribner's study, participants in this study were enrolled in courses in an environment where they have choices between traditional classroom courses and those offered on the Internet.

The findings from this study were compared with Scribner's original findings to determine how the undergraduate learners' perceptions of effective motivational strategies differ from those of their high school counterparts. The results of the study will contribute to the ability to design online instruction that is motivating to college students.

Research Questions

The following research questions were addressed in the study:

Research Question 1: What instructional strategies do undergraduate college students perceive will motivate them to engage in learning in a web-based learning environment?

Research question 2: What instructional strategies do undergraduate college students perceive will motivate them to persist in learning in a web-based learning environment?

Significance of the Study

The intent of this study was to collect information from learners that will help instructional designers create online instruction that is motivating. Motivating learners to succeed in web-based learning environments is of concern for instructional designers (Margueratt, 2007; Paas et al., 2005; Scribner, 2007). Scribner (2007) states that learner engagement in web-based courses may vary based on the individual's level of motivation. The incorporation of strategies into web-based instruction that are perceived by learners to be motivating could increase engagement in learning and achievement (Choi, 2007; Fenrich, 1997; Margueratt, 2007; Scribner, 2007). "The success of online courses may rest in the perceptions of the student" (Rodriguez, Ooms, Montanez, & Yan, 2005, p. 4), so "it is necessary to obtain information directly from the students as to what they believe is instructionally motivating, especially when the course is taken online" (Scribner, 2007, p. 17).

Definition of Terms

Distance education/learning: Instructional programs or courses in which the instructor and students are not in the same physical location. These courses or programs can utilize computers, the Internet, audio and/or video media for delivery (Ahern, Cooper, Lan, Liu, Shaw, Tallent-Runnels, & Thomas, 2006).

E-learning: term used to describe any learning that is electronically mediated or facilitated by transactions software (Ahern et al., 2006).

Instructional Design: “is the art and science of creating an instructional environment and materials that will bring the learner from the state of not being able to accomplish certain tasks to the state of being able to accomplish those tasks” (Broderick, 2001, para. 1).

Instructional strategy: are the plans and techniques that instructional designer uses to motivate the student to engage in learning (Hathaway, 2009).

Motivation: “what a person will do, whereas ability refers to what a person can do” (Keller, 1983, p. 388) or a student’s willingness, need and desire to participate in and be successful in the learning process (Lockett & Jones, 2005).

Motivational design: “refers to the process of arranging resources and procedures to bring about changes in motivation” (Keller, 2006, p. 3).

Motivational strategy: methods used to reach or accomplish a motivational goal or objective.

Motivational elements: assets used in instruction to increase motivation in the learning process which may include multimedia, supportive messages, technology and novelty, games and fantasy, control and choice, and social interactions (Scribner, 2007).

Online: The act of being actively connected to a network, typically the Internet, which permits the user to receive and upload data (Vafa, 2002).

Online course: Distance education courses that are delivered and can be taken entirely through the Internet using a computer and web-based applications, where there are no face to face interactions with the instructor during any part of the instructional process (Ahern et al., 2006; Scribner, 2007; Vafa, 2002).

Web-based instruction: Instruction similar to that which may be found in an online course. The term online can imply synchronous participation, which is not necessary in a course where only the instruction is provided via the Internet.

Assumptions and Limitations

The study is based on the following assumptions. First, it was assumed that all the participants would have the necessary technical ability to complete the web-based survey instrument. Second, it was assumed that all of the participants would have the capacity to understand the survey instrument. Finally, it was assumed that each participant would be honest in recording responses, and submit only one survey.

The limitations of the study are as follows. First, only students from a single institution in the southeast region of the United States are to be included. Second, all of the data will be gathered at a single point in time. Third, information from students who

do not complete the survey properly will not be included in the final data. Finally, the study was being conducted by a single researcher with limited time and a limited budget.

Nature of the Study

The study was conducted utilizing a convenience sample procedure, recruiting volunteer participants attending a public college in the state of Georgia who have enrolled in one or more online undergraduate course during their college career. It is anticipated that the results of the study could be generalized to other, similar learners.

The entirety of the data collection will be completed at one time. If a participant fails to complete all portions of the study, then that individual's information will be removed from the study. All participants will be presented with the same information.

In the first part of the study, data pertaining to learner motivation will be collected by means of a survey. The instrument to be used in this study was developed by Scribner (2007). Permission has been granted by Dr. Scribner to use and modify the original survey tool to address college students.

In the second part of the study, general demographic information will be collected about the participant including gender, age group (traditional or nontraditional), active enrollment, and online course experience.

Organization of the Remainder of the Study

The remainder of the study will be divided into four chapters. Chapter 2 is comprised of a review of literature that contributes to the existing knowledge base related to the research topic. The research method, including the survey instrument and data

analysis procedures, is described in chapter 3. The research findings will be presented in chapter 4. Chapter 5 will complete the dissertation with a summary of the problem, an interpretation of the results, and a discussion of implications arising from the findings.

CHAPTER 2. LITERATURE REVIEW

Introduction

People tend to choose the experiences or goals they are willing to attempt or avoid and the degree of effort they are willing to put forth toward that experience or goal rather than what their abilities empower them to accomplish (Keller 1987b; 1983). This is commonly referred to as motivation.

Students are motivated **intrinsically or extrinsically** to engage and persist in learning. Students who are motivated to learn tend to have greater success than by those who are not (Hodges, 2004). Unfortunately not everyone is motivated under the same condition and circumstances (Keller 1987b; 1983; Margueratt, 2007). The question to be answered is **“What instructional features will motivate current college students taking online courses?”**

This chapter will review literature relating to Internet-based distance education, characteristics of distance learners and motivational design of web-based instruction. Studies will be presented that support or refute the value of motivational elements in web-based classrooms to engage learners.

Distance Education in the Modern Era

During the last century distance education evolved from using a correspondence medium to personal computers and the Internet (Daymont & Blau, 2008). Distance education began as correspondence teaching in Sweden in the early nineteenth century.

Within a few decades, distance education programs were also available in the UK, Germany, Japan, and the United States (Larson, 2008).

Distance education offered an alternative method to the traditional classroom (Cicco, 2007). This alternative method separated the learner and instructor by geographic location and time (Saba, 2005; Spector, 2009). Goodwin (2006), states that from the 1850's to 1960, one-way communications, either by mail or telephone, were used between instructor and student. Print was the primary media involved in distance education until radio arrived in the 1930's and television in the 1950's (Goodwin, 2006; Kirtley, 2002; Roberts, 2003). Radio and television were also one-way methods of communication.

A limitation of broadcast mass media for distance education was the time dependency in which students were required to be available at specific times (Ally, 2004; Goodwin, 2006). From 1960 to the mid 1980's, multiple technologies such as audio recordings, video recording, and facsimile were used to improve the time dependency issue from earlier technologies (Goodwin, 2006; Kirtley, 2002; Roberts, 2003).

The introduction of personal computers and advances in Internet technologies influenced the options for distance education delivery (Archibong, 2007; Cicco, 2007; Goodwin, 2006; Larson, 2008; Patterson, 2007; Tarari, Dogas, Dabic & Peric, 2008). The progression and adoption of technology allowed educators to utilize the personal computer not long after it was introduced to the consumer market in 1976. The integration of personal computers brought distance education into the modern era (Goodson, 2001).

Less than two decades after the personal computer was introduced, the Internet and the World Wide Web became easily accessible to the public. Through these technologies people gained the capability communicate around the globe inexpensively and almost instantaneously. Educational institutions began to utilize new technologies for web-based distance education that opened doors to new methods of teaching and delivering instruction (Rhode, 2008).

Of the institutions that were not offering web-based distance education courses at the turn of the century, 20% planned to offer a related service by 2002 (Alexander, Perreault, & Waldman, 2002). In 2002, 1.6 million students were taking at least one web-based course. In the fall of 2007, that number had grown to 3.9 million, a figure that represented 20% of all higher education students in the United States (Allen & Seaman, 2008). By the fall of 2008, 4.6 million students were taking one or more online classes which was a 17% increase from the previous year (Allen & Seaman, 2009). The number of colleges offering web-based courses has increased dramatically and as enrollment continues to increase (Sperry, 2009; Wilkes, Simon, & Brooks, 2006), as online education becomes “the norm rather than the exception for many higher education institutions” (Rhode, 2008).

The growth in the number of Internet users is particularly significant when one considers the short amount of time in which the growth has taken place. Other communications technologies were not adopted so quickly. After the radio was introduced, it took 37 years to reach 50 million people; television took nearly 15 years to reach the same number (Curran, 2001). In contrast, the World Wide Web and the Internet

were adopted and used by 50 million people in only three to four years (Curran, 2001; Hannemyr, 2003).

Distance education in the modern era is dependent on recent technologies such as computers and telecommunications for networking. The growing number of personal computers and increased accessibility to the Internet allowed web-based distance education to become more accessible both to educational institutions and prospective learners while limiting the sacrifices or compromises of the individual to work and family (Larson, 2008; Patterson, 2007; Seaberry, 2008). These technologies have greatly influenced changes in distance education (Curran, 2001; Kanuka, 2008). The technology required for the majority of distance education courses is not much different than the technology that most students already have at home (Compton & Schock, 2000; Fuchs & Wößmann, 2005). These readily available and accessible technologies have allowed underprivileged individuals access to the opportunity of web-based distance education (Cicco, 2007; Daniels, 2008).

Web-based education has created flexible and convenient methods of working around family and careers (Archibong, 2007; Cicco, 2007; Kanuka, 2008; Patterson, 2007; Sperry, 2009). Cicco (2007) states that “online classes can provide an alternative form of instruction of the right subject matter, with the right instructor, and for the right student” (p. 18), if designed properly.

Web-based instruction presents a shift in paradigm where “instructors are no longer the purveyors of knowledge, but learning facilitators” (Fazioli, 2009, p. 12). Web-based education can utilize the Internet and related technologies for a variety of applications ranging from the Internet-based research to taking entire courses online

(Ahern et al., 2006). In several instances the Internet is used to supplement instruction, through the use of a website to communicate information to students who are in a face-to-face class (Ahern et al., 2006). Fully online courses have been most prevalent but hybrid courses are a growing trend (Allen, Seaman, and Garrett, 2007; Allen & Seaman, 2008; Allen & Seaman, 2009; Hathaway, 2009). Hybrid or blended courses are those that combine traditional, face-to-face components with between thirty and eighty percent of instruction online (Ahern et al., 2006; Allen & Seaman, 2008; Allen & Seaman, 2009; Allen et al., 2007). Face-to-face components may include orientations, lectures and peer presentations.

Characteristics of Online Learners

A key piece of information for instructional designers is to know who the participants in web-based learning environments are. Research has identified many characteristics of successful online learners. Many studies suggest that web-based courses, and therefore online learning, are well suited for independent (Diaz, 2000; Doherty, 2006; Huett, Moller, Foshay, & Coleman, 2008; Kerr, Kerr, & Rynearson, 2006; Mupringa, Nora, & Yaw, 2006; Scribner, 2007) and self-efficacious learners (Daniels, 2008). Successful online learners also tend to be more mature than their classroom counterparts (Finnegan, Morris & Wu, 2005; Scribner, 2007). Given the nature of course management systems or online learning environments, one of the common expectations for the learner to be successful is to be minimally proficient with the technology used (Daniels, 2008; Mupringa et al., 2006; Scribner, 2007). In order to be

successful in web-based courses where the majority of activities are text-based, the learners need to have **good written communication skills** (Daniels, 2008; Huett, Moller, Foshay et al., 2008; Kerr et al., 2006; Mupringa et al., 2006; Scribner, 2007). Learners **who are more successful tend move through the course materials more quickly** than less successful students (Ahern et al., 2006) which **suggests that these learners have increased self-motivation, and self-discipline** (Daniels, 2008; Huett, Moller, Foshay et al., 2008; Kerr et al., 2006; Mupringa et al., 2006; Scribner, 2007).

The two most commonly and easily collected characteristics **are age and gender**. The age of college students is typically broken into two groups – traditional and nontraditional. Those who are considered traditional college students are 18 to 24 years of age, while nontraditional students are defined as over the age of 24 (Bell, 2003; Bowl, 2001; Dornan & Justice, 2001; Kim, 2002; Laanan, 2003; Leonard, 2002).

Since the 1970s, college enrollment of traditionally aged students has risen and fallen. Research shows that many college environments may include more students over the age of 24 than previously thought. Research at Long Beach City College found that 66% of online learners were over the age of 24 (Juarez 2003). Bedore's (2005) study at the Art Institute Online found that, of the total student population, 75% were over the age of 24. Many institutions have expanded programs to accommodate nontraditional students, resulting in a noticeable change in the average age. In 1980, the average age of undergraduate students was 27; by the 1990's, the average age had risen to 29 (Laanan, 2003). Approximately 32% of the students enrolled in undergraduate institutions were found to be 30 years of age or older (Dornan & Justice, 2001; Laanan, 2003). Over half of the undergraduate population is older than 24 years of age (Bell, 2003; Evelyn, 2002)

at many U.S. institutions. Many learners, over the age of 24, are enrolling in college courses for the first time or to complete a degree (Howell, Williams & Lindsay, 2003).

Non-traditionally aged adult learners are the fastest growing segment in higher education (Hathaway, 2009). A majority of these **adult learners are** the first generation in their families to attend college (Reay, 2002). This increase in the number of adult learners is considered by some to be a positive development; many faculty and students agree that a classroom with a mixture of traditional and adult learners creates a preferred learning environment (Sullivan, 2001).

Studies show that distance education students tend to be older than the traditional campus-bound counterparts (Diaz, 2002; Balaban-Sali, 2008; ; Bell, 2003Pritchett, 2009; Wilkes et al., 2006) who live and work significant distances from campuses (Wilkes et al., 2006). Laanan found that of 114 students, 55 years of age or older, attending 36 public two-year colleges across the United States, approximately 40% were enrolled full-time. Stuart, Varonis, Oswald and Newton (2003) found 87% of students participating in web-based courses at the University of Akron were over the age of 24.

Studies indicate that a **large percentage of female learners participate** in web-based courses. Navarro and Shoemaker (1999) surveyed students participating in an online course at the University of California-Irvine and found that 60% were female. Clayton (2001) completed a report on the students participating in web-based courses at Middle Tennessee State University. Her findings showed that female students dominated the population in the academic years 1997-1998, 1998-1999, and 1999-2000. McEwen and Gueldenzorph (2003) completed a study of online students at North Carolina A&T State University, based on enrollment in the spring semester of 2001. The data showed

that 47% of the online students were male and 42% were female, with an 11% set of missing data regarding gender. Of these same students, 42% were traditionally aged (18 to 24) and 48% were nontraditionally aged (24 and over), with a 10% set of missing data regarding the age of the students.

The Second Report to Congress on the Distance Demonstration Program by Paige, Stroup and Andrade (2003), was based on data provided by 107 institutions in the United States. In this study, female participants were found to comprise 58% of the population of students. And participants aged 25-34, constituted 80% of the population. Paige et al. clarify that "the distribution of male and female distance education students across age groups is very similar. Over one-third of both men and women are in the 25-34 -age range and two-thirds are in the 25-44-age range" (2003, p. 6).

Other institutional studies show similar findings. Research at Long Beach City College (Juarez, 2003) found that 72% of online students were female and 66% were non-traditional students. Bedore (2005) found in an Art Institute Online study that their student body was comprised of 97% female and 75% non-traditional students.

Based on these studies, the majority of online learners tend to be females over the age of 24 (Bedore, 2005; Clayton, 2001; Juarez, 2003; Laanan, 2003; Margueratt, 2007; McEwen & Gueldenzorph, 2003; Navarro & Shoemaker, 1999; Paige et al., 2003; Pritchett, 2009; Stuart et al., 2003).

The majority of online students are enrolled in undergraduate courses (Allen & Seaman, 2008; Allen & Seaman, 2009; Allen, et al., 2007; Hathaway, 2009). In the fall of 2008, 82% of students taking online courses were at the undergraduate level (Allen & Seaman, 2009), with an increase of 2% from the previous year (Allen & Seaman, 2008).



Many online students retain attitudes developed in the traditional classroom situation (Hauske, 2007). One of the few differences noted in the performance of online learners is attributed to the individual student's effort as they spend less time on task than their counterparts in face-to-face courses which averages only three hours per week per course (Ahern et al., 2006). Learners also perceive that they will experience the things that matter most to them in an on-campus course rather than in a web-based course (Wilkes et al., 2006). Changing the traditional classroom educational models to web-based models makes the learning experience more meaningful to "net-generation students" (Tarari et al., 2008), those born from the mid-1970's to the early 2000's. These net-generation students view technology as key for learning, particularly web-based learning environments (Hathaway, 2009).

There is no single set of definitive data that identifies the overall demographics of the student population of web-based courses as they may vary by institution. However, further studies of enrollment trends can be expected to result in a broader understanding of the field of distance and online education in the United States.

Characteristics of Adult Learners that Influence Learning

The nontraditional, adult learners of 25 years and older, differ from their younger peers. Adult learners tend to enter into a distance learning experience by choice with a more positive attitude and higher motivation than their younger counterparts (Keller, 1983; Margueratt, 2007; Scribner, 2007). Since adult learners tend to be more motivated, they require less supervision than their younger counterparts (Huett, Moller, Foshay &

Coleman, 2008; West & Jones, 2007). The adult learners also tend to be more independent, self-directed and goal-oriented. Learning for adults is typically related to their goals and they participate in new learning experiences as a result of their needs. As a result, adult learner motivation is more internal than external (Baumgartner, Lee, Birden, & Flowers, 2003; Cyr, 1999).

If the characteristics of this older population are not immediately attended to, the attitudes can quickly change in a negative manner (Margueratt, 2007). Margueratt continues by stating that “distance and adult learners are already motivated to learn by virtue of the fact they self-select to engage in their studies” (2007, p. 18). The adult learners who are voluntarily enrolled in distance learning (Scribner, 2007) are generally easier to motivate (Pritchett, 2009), as this provides an opportunity to further their education (Sperry, 2009). In contrast, their younger counterparts view learning as a means to an end (Margueratt, 2007). Online courses are attractive to the adult learners because they break down the barriers of time and distance, allow attainment of personal and professional goals, and provide flexibility around work and family schedules (Daymont & Blau, 2008; Fazioli, 2009; Gayton & McEwen, 2007; Hathaway, 2009; Mupringa et al., 2006; Rhode, 2008; Sperry, 2009; Tarari et al., 2008; Wilkes et al., 2006). Students may live a significant distance from campus (Gayton & McEwen, 2007).

Nontraditional learners in 2009 have different technological experiences than their traditionally aged counterparts. For example, college students of traditional age “now spend more time using digital media and technology than watching television” (Scribner 2007, p. 16). The younger students can be considered digital natives, as they have grown up with the computer technologies and tend to be comfortable integrating

these technologies into everyday activities (Seaberry, 2008). Scribner further clarifies that the adoption of or regular usage of these digital media and technologies should not be generalized to an older population whose experiences with technology are significantly different (2007). The adult learners view the technology involved in web-based courses as a means to an end (Fazioli, 2009).

Motivation in Learning

The importance of applying motivational strategies in instruction has been acknowledged in a number of studies. Motivation is a critical component in learning (Huett, 2006; Huett, Kalinowski et al., 2008; Kim, 2004). Identifying strategies that motivate learners and attending to those strategies in the instructional design process will likely lead to increased engagement and persistence in learning of students (Margueratt, 2007; Pritchett, 2009; Scribner, 2007). Using motivational instructional strategies in creating a learning environment that promotes the learners motivation to engage and persist in learning, needs to become an integral part of the instructional design process (Scribner, 2007; Sperry, 2009). Engagement in learning is seen as the learner's psychological investment in and the effort directed toward mastery of the material (Connell, Kinderman, Skinner, & Wellborn, 2009). This concept of engagement (Huett, Kalinowski et al., 2008) is related to the initial commitment for the learner to participate (Song, 2000). Without proper initial motivation to participate, learners do not participate or become nonstarters. Nonstarters are the learners who register for a course but do not initiate learning or participation in the course (Song, 2000).

Persistence in learning is also referred to as continuing motivation which is a type of intrinsic motivation reflective of an individual's willingness to learn (Huett, Kalinowski et al., 2008). The motivation to continue and motivation to persist are important factors in computer based instruction (Kim, 2004). Without the motivation to persist, learners drop courses or procrastinate in participation (Song, 2000). Continuing motivation can be viewed as intrinsic motivation. This is because learners who are intrinsically motivated already study and participate because of their interest in learning (Song, 2000).

Sperry, noted that poor course design methods and content presentation may lead to decreased learner motivation and that "more information regarding what keeps students motivated to stay in the online classroom is needed" (2009, p. 2). Various types of human learning can require different kinds of instructional strategies (Hathaway, 2009). "The importance of understanding the learner's goals, needs, and motivations in taking a course is a basic tenet of instructional design" (Ahern et al., 2006, p. 109). In order to maximize the learning experience, a variety of instructional strategies should be used to address diverse learning styles, cognitive styles, needs, and expectations (Ahern et al., 2006; Gayton & McEwen, 2007; Mupringa et al., 2006). Any course will have learners of various styles, backgrounds and levels of preparedness which will influence their engagement in the learning environment (Mupringa et al., 2006).

Academic motivation is not a reflection of a learner characteristic but rather a product of interactions with several internal and external factors, many of which change over time (Connell et al., 2009; Gabrielle, 2003; Huett, 2006) and situation. The learner can have different levels of motivation at different times (Gabrielle, 2003; Huett, 2006).

Social cognitive theory states that external environmental factors aid in developing the internal behavior standards of the individual (Gaythwaite, 2006). In 2009, Connell et al. stated:

Motivation is the product of static characteristics, such as self-perceptions and social cognitions, and toward conceptualizations that have the potential to begin integrating individual difference, process, and developmental views of motivation, eventually leading to studies that explicitly investigate their dynamics. (p. 228)

Gaythwaite (2006) states that “as a person develops cognitively, gains experience, and builds social awareness, personal standards are formed. Personal standards regulate motivational behavior chiefly by the self-absorption of stimuli” (p. 15). This can be interpreted to mean that motivation is a byproduct of free will coupled with an internal compulsion for self-actualization (Huett, Kalinowski et al., 2008). “Self-actualized individuals are gratified in their basic needs and become far less dependent, far more self-directed, and for more autonomous than those functioning at a lower level in the motivational hierarchy” (Margueratt, 2007, p. 17).

Instructional designers need to understand learners and what motivates them to engage and persist in learning in web-based courses. Learner motivation should be a primary determinant in building delivery systems (Ahern et al., 2006). Margueratt states that there is a definite relationship between motivational factors and engagement that can assist in identifying strategies that might be incorporated into a web-based course or program to attract and retain the learners (2007). In order to support learning in web-based learning environments, learner motivation should be addressed and changed through the progression of instruction (Fazioli, 2009; Huett, Kalinowski et al., 2008;



Song, 2000). Huett adds that “motivation provides the impetus to learn and to achieve one’s goals” (2006, p. 16). Motivation is the driving force for engagement in learning, allowing learners to achieve these goals and succeed in web-based learning experiences (Sperry, 2009).

Keller (2010; 1987b; 1983), found that motivation defines “what a person will do, whereas ability refers to what a person can do” (1983, p. 388) and that “the choices people make as to what experiences or goals they will approach or avoid, and the degree of effort they will exert in that respect” (1983, p. 389) toward that experience or goal. Motivation helps the individual pursue a goal and persist in that decision with the effort necessary to complete the task (Cheng & Yeh, 2009). Motivation influences learning by determining which instructional goals learners will attend to and which they choose to ignore, as well as the effort they will expend to reach certain goals (Keller, 1987b; 1983).

“Understanding what motivates students to choose online courses, how to match learning styles with instructional design, and how to deliver this type of instruction are some of the issues researchers are beginning to investigate” (Ahern et al., 2006, p. 109). Some students, for example, seek out online courses with a significant component perceived as consistent with their preferred learning style or personality (Daymont & Blau, 2008). Others choose convenience as the driving factor (Daymont & Blau, 2008; Fazioli, 2009; Gayton & McEwen, 2007; Hathaway, 2009; Mupringa et al., 2006; Rhode, 2008; Sperry, 2009; Tarari et al., 2008; Wilkes et al., 2006).

There are two types of motivation that affect learning: intrinsic and extrinsic motivation. Intrinsic motivation is an internal factor where there is a willingness of the learner to engage in an activity for its own sake (Cheng & Yeh, 2009; Fazioli, 2009;

Schunk, Pintrich, & Meece, 2008). Intrinsic motivation is innate as humans possess inborn psychological needs, like the physiological needs for food and water. Intrinsic motivation should be comprised of enthusiasm, flexibility and joyful involvement (Connell et al., 2009).

Intrinsic motivation should be inherent to instruction (Duff & Quinn, 2006; Margueratt, 2007) in order for the learners to consider the instruction fun or interesting (Alessi & Trollip, 1991; Alessi & Trollip, 2001; Parrish, 2009). Intrinsic motivation is important and necessary to engage learning (Scribner, 2007, p. 13). Engagement in learning stimulates intrinsic motivation (Rodgers & Withrow-Thorton, 2005). When learners are intrinsically motivated, they tend to gain more knowledge from, apply greater creativity to and associate greater pleasure with learning activities (Cheng & Yeh, 2009). Margueratt states that “people exhibiting intrinsic motivation do not necessarily need an exterior motive for their actions” (2007, p. 31). Margueratt continues by stating that it is “unrealistic to suggest that students universally engage in learning solely for the joy of the experience, as there is usually some ulterior motive for learning beyond pure satisfaction” (2007, p. 31). The rewards of learning should not be forced, but meaningful (Parrish, 2009).

Extrinsic motivation consists of external influences that encourage the learner to participate in an activity to attain personal goals (Cheng & Yeh, 2009; Margueratt, 2007; Pintrich & Schunk, 1996; Schunk, Pintrich, & Meece, 2008). Extrinsic factors include demands from authority, rule compliance and fear of punishment. (Connell et al., 2009). Earning a grade for completing a task is an example of extrinsic motivation while completing the task for the sake of learning is an example of intrinsic motivation. A study

by ChanLin (2009) found that external motivators kept students on track. Extrinsic motivation can sometimes undermine self-motivation (Lockett & Jones, 2005) as it may generate productive behavior that emphasizes minimal effort (Cheng & Yeh, 2009).

Motivational Design of Instruction

The ARCS Model of Motivation provides a framework for looking at factors that can be addressed to make instruction motivating. The ARCS Model of Motivation incorporates motivational elements into the instructional design process (Huett, 2006; Keller, 1999; 1987b; 1983; Margueratt, 2007; Scribner, 2007) to stimulate and manage learner motivation (Huett, Kalinowski et al., 2008). A motivational design process resulting from the ARCS Model is described as a problem solving approach that structures instruction to motivate learners based on satisfaction and expectancy of success (Keller, 1987b; Keller & Suzuki, 2004). Keller defines motivational design as “the process of arranging resources and procedures to bring about changes in motivation” (2006, p. 3). Motivational design is a prescriptive, systematic approach, that when applied properly, can improve a person’s motivation to learn (Durdu, Yalabik & Cagiltay, 2009; Huett, 2006; Huett, Kalinowski et al., 2008; Huett, Moller, Forshay et al., 2008; Keller, 2006) and which should be considered during all stages of the design process (Huett, 2006). Scribner states that “the ARCS Model assumes that strategies embedded in the design of instruction will enhance a student’s attention to the learning content, and increase their confidence and satisfaction about learning with the ultimate goal of enhancing cognitive performance” (2007, p. 32).

The ARCS Model of Motivation is a practical way for developers to incorporate motivational elements into the instructional design process (Huett, 2006; Johnson & Aragon, 2003; Keller, 1999; 1987b; 1983 Margueratt, 2007; Scribner, 2007;). A motivational design process resulting from the ARCS Model is described as a problem solving approach that structures instruction to motivate learners based on satisfaction and expectancy of success (Keller, 1987b; Keller & Suzuki, 2004).

The ARCS Model consists of four dimensions of motivation - attention, relevance, confidence, and satisfaction (Keller, 1999; 1987b; 1983) and is described as the only complete instructional design model to accommodate motivation (Huett, Moller, Young, Bray & Huett; 2008). Applying these principles creates an engaging, effective e-learning experience (Alonso, Lopez, Manrique & Vines, 2008; Balaban-Sali, 2008).

The first dimension of motivation in the ARCS Model is attention. Attention is the action of gaining the users attention and interest or arousing and sustaining their curiosity (Alessi & Trollip, 1991; Kebritchi, 2008; Keller, 1999; 1987b; 1983; Keller & Suzuki, 2004; Margueratt, 2007; Parrish, 2009). Maintaining the learner's motivation through attention is important and can contribute to engagement and persistence in learning. Attention must be gained early on and maintained throughout the instruction (Alessi & Trollip, 1991; ChanLin, 2009; Parrish, 2009). The result of gaining the user's attention is that the learner must now focus on the task in order to learn how to perform it well (Dick & Carey, 1996). Attention is likely the most critical of the four parts of the ARCS Model (Keller, 1987b). Attention is a major influence on motivation that students need for success in learning (Keller, 1983) and should be addressed by instructional designers to capture the learner's attention when the instruction is delivered. Heinrich et

al. (1996) argues that motivation can be influenced by factors which include how long learners pay attention, and how much effort they invest in learning.

Many learners may initially experience web-based distance education as novel or fun. Unfortunately, these same learners lose interest as the course becomes mundane and routine (Parrish, 2009). The initial novelty of the web-based experience and technology typically translate into a temporary increase in learner motivation (Balaban-Sali, 2008; Huett, 2006; Huett, Kalinowski et al., 2008; Keller & Suzuki, 2004; Scribner, 2007) which can no longer be counted on to stimulate the learners' motivation (Huett, Moller, Young et al., 2008). Poorly designed instruction that lacks continuing motivational appeal can also cause the learner to lose interest (Fenrich, 1997; Huett, Kalinowski et al., 2008; Parrish, 2009) while motivation and confidence decrease (Keller & Suzuki, 2004). Novelty lasts only for a short while, then, learners will eventually lose interest and motivation and confidence will decrease (Huett, 2006; Huett, Kalinowski et al., 2008; Parrish, 2009). Dick and Carey maintain that the "major criticisms of instructional materials are their lack of interest and appeal to the learner" (1990, p. 173).

A number of strategies have been identified for addressing attention in instruction. One method for increasing attention is by presenting the material in a novel or engaging fashion; a manner which is not expected or not previously experienced by the learner (Cicco, 2007; Fenrich, 1997; Henrich, 1999; Margueratt, 2007). Another is to vary the responses to the learner's interactions or input (Alessi & Trollip, 2001; Fenrich, 1997; Hodges, 2004). Variety is a key to increasing attention and motivation. Attention can be gained by varying the appearance of the instructional materials, using abstraction with examples, and surprising the learner with incongruity (Margueratt, 2007) resulting in an

indirect, positive effect on learning (Fenrich, 1997; Margueratt, 2007). Display and response variety increase the learners motivation (Alessi & Trollip, 2001; Driscoll, 2005). The visual variety causes the user to pay more attention (Alessi & Trollip, 2001) as the learner's motivation may change over time (Blunt, 2006; Keller, 1999). Instructional designers should keep in mind that it is important not to over stimulate the learner early in the instruction, nor to use only one instructional method of stimulation (Kebritchi, 2008; Margueratt, 2007).

Relevance is the second dimension of motivation in the ARCS Model.

Instructional designers need to emphasize the relevance of the instruction to learners

(Duff & Quinn, 2006; Johnson & Aragon, 2003; Kebritchi, 2008; Keller & Suzuki, 2004; Margueratt, 2007) as the learner needs an understanding of the importance of the material (Duff & Quinn, 2006; Scribner, 2007).

Strategies for increasing relevance include using examples and language that are familiar to the learner. Creating familiarity with the material will provide the learner with relevance (Fazioli, 2009). Rossett & Chan add that the learner “must see the value in what is available and what is asked of them” (2008, p. 3). A lack of relevance will decrease learner motivation (Duff & Quinn, 2006; Fazioli, 2009). Keller (1987b; 1983) and Daniels (2008) found that learners should be actively engaged and accept responsibility for their learning. In particular, adult learners tend to be motivated to learn information that they deem relevant and useful (Duff & Quinn, 2006; Fazioli, 2009). Impressing upon the learner the relevance of the material can be accomplished through well-written learning objectives (Alessi & Trollip, 1991). As Keller (1983) states, emphasis is needed as to why the learner needs the presented information. A method for

communicating relevance is to relate the material to the learners' past experiences (Margueratt, 2007), or to a case or situation that is familiar to the learner.

The third dimension of motivation in the ARCS Model is confidence. Keller defines confidence as the learners beliefs that they have the ability to succeed and that they control their own success (1987a). Persistence in learning is enhanced by this confidence (Keller & Burkman, 1994). Addressing confidence helps learners understand their abilities to reach their objectives while removing the fear of failure (Fazioli, 2009). The resulting understanding is necessary to give learners a sense of self-efficacy (Keller, 1987b; 1983). Learners must be confident that they can master the learning objectives (Keller & Suzuki, 2004) and can succeed with a task with the information provided (Margueratt, 2007). Confidence, or self-efficacy, could account for the learners' level of motivation, affecting the engagement in online courses (Huett, Kalinowski et al., 2008; Irizarry, 2002). Another key component of confidence is the expectancy for success (Huett, 2006). Expectancy for success is the individual's perceived likelihood of success and the extent of the learners' control over their success (Keller, 1987b; 1983). Huett, Moller, Foshay et al. (2008) refer to expectancy as how people will pursue activities which bring about the most reward.

Expectancy-value theory suggests that where value is attached to a task and the learner believes it is possible for them to complete the task, motivation increases as the value of the task and the expectation to succeed increases. Improving the confidence towards the probability of success along with increasing the value of the task by way of creating a higher degree of relevance for the content, expectancy-value theory predicts a higher degree of motivation (Rodgers & Withrow-Thorton, 2005).

Margueratt states that “establishing motivational elements in the instructional strategy is accomplished by creating expectancy and anticipation in the learning materials” (2007, p. 42). Expectancy is established by informing learners what to expect as a consequence of the learning activities and what is expected of them for their learning (Margueratt, 2007). Personal expectancy for success raises the individual’s motivation (Keller & Suzuki, 2004; Keller, 1987b; 1983). A principle of instructional design is that the students learn more effectively when informed in advance of concepts and skills that aid in the focus of their studies (Keller & Burkman, 1993; Margueratt, 2007).

Confidence can be gained or increased by explaining expectations clearly (Alessi & Trollip, 1991). Feedback is important for increasing confidence as it builds a relationship between the learner and the results of their efforts (Margueratt, 2007). Huett states that “the key is having confidence in one’s success at a given task” (2006, p. 29). Increasing the learner’s confidence can help the learners to avoid becoming overwhelmed with details that could result in frustration (Keller, 1987b; 1983). New learning should be built upon previously discussed material while maintaining challenging learning tasks that are not insurmountable (Scribner, 2007; Yeo & Quek, 2008), referred to as scaffolding learning (Ahern et al., 2006; Hathaway, 2009; Hauske, 2007; Mupringa et al., 2006; Scribner, 2007). Sequencing content defines a learning path and provides novice learners with guidance (Hauske, 2007) which supports cognitive function (Ahern et al., 2006; Mupringa et al., 2006). Instructional designers need to organize online interactions to scaffold the learning process and guide the student for their learning to be more efficient and effective. Unstructured learning can cause the student to construct misunderstandings in a time-consuming process (Ahern et al., 2006). The scaffolded

learning should be analyzed to maximize opportunity for individual to experience meaningful learning by having a deep understanding of relevant and complex ideas (Ahern et al., 2006; Hathaway, 2009). When increasing the difficulty of a series of tasks, instructional designers need to accommodate learner diversity within the content while maintaining ease of use (Larkin-Hein, 2001; Margueratt, 2007).

The fourth dimension of motivation in the ARCS Model is satisfaction.

Satisfaction is achieved when learners gain a sense of achievement or accomplishment through the learning experience (Kebritchi, 2008; Keller, 1987b; 1983; Keller & Suzuki, 2004). Learners expect satisfaction or rewards for their efforts (Fazioli, 2009).

Satisfaction can result from a combination of extrinsic rewards and intrinsic motivation (Keller, 1987b; 1983). Extrinsic motivation is a result of the student's effort being recognized and the student potentially being rewarded for the effort (Scribner, 2007). An intrinsic aspect is seen as the learner gaining mastery using a skill (Dick & Carey, 1996; Keller, 1983; Scribner, 2007). Natural satisfaction occurs when the learner realizes the new skills are immediately useful and beneficial (Keller, 1987b).

Learner satisfaction with a web-based course does not come from a single element or aspect but rather from the learning experience as a whole (Chan, 2007). Learners with higher satisfaction typically spent more time on task, or engaged, (Bolinger & Martindale, 2004; Merena, 2006) which resulted in increased success (Gunter, 2007; West & Jones, 2007). If learners are successful, they are more likely to complete the course (Moore & Kearsley, 1996; Scribner, 2007). Sperry (2009) continues by stating that students report higher satisfaction in well designed courses.

The ARCS Model provides guidance in creating motivational tactics, through a systematic design process, to match the learner's characteristics and needs (Huett, 2006; Keller & Suzuki, 2004). In order to produce instruction that motivates the learner, all four dimensions of motivation in the ARCS Model must be considered throughout the design of instructional strategy (Dick & Carey, 1990). Dick and Carey point out that "when taken alone, any of the four aspects of Keller's model may not be sufficient to keep a learner on task in a learning situation" (1996, p. 185). However, if all four dimensions can be incorporated into a motivational strategy then "the likelihood of maintaining the learner's interest is greatly increased" (Dick & Carey, 1996, p. 185).

Margueratt states that "the excitement of learning must be maintained throughout the learning experience" (2007, p. 10). Motivation should be initiated before engagement and continue during learning to enhance the learner's experience and increase their likelihood of continuing a program of study and with distance education (Margueratt, 2007). The ability to maintain the student's interest throughout the instruction process is a challenge for the instructional designer (ChanLin, 2009; Margueratt, 2007). Increased learner motivation is a result of a personal connection between the learner and the instructional materials which is directly affected by the manner in which the material is presented (Fazioli, 2009).

Instructional designers need to be proficient with the strategies that comprise motivational design as well as instruction and content design (Alessi & Trollip, 1991; Alessi & Trollip, 2001; Hodges, 2004; Margueratt, 2007). Even instruction that is perfectly sequenced and worded may fail due to the learner becoming bored (Alessi & Trollip, 2001). Poorly designed instruction can de-motivate a motivated student just as a

well-designed instruction can motivate an unmotivated student (Brennan, 2002; Huett, Kalinowski et al., 2008; Kumarawadu, 2004; Margueratt, 2007).

Motivational Design and Web-based Education

Learner motivation is a key to increasing the learner's participation and activity level (Fazioli, 2009; Omar et al., 2009; Sperry, 2009). Web-based education environments present unique challenges to designers who make an effort to motivate learners (Huett, Moller, Young et al., 2008). A practical concern for instructional designers is to motivate students to achieve in a web-based learning environment (Paas et al., 2005) as the instructor is physically removed from the learner and therefore may have less direct influence on the learner's motivation (Margueratt, 2007). Instruction should include meaningful examples, motivation and valuable content (Hathaway, 2009) structured to provide guidance and orientation (Hauske, 2007).

Students have concerns regarding the quality of online courses in general (Allen et al., 2007). Instructional design affects the quality of online learning more than delivery of the materials (Ahern et al., 2006). Designing instructional materials requires pedagogical skills rather than technical expertise (Hauske, 2007). "Many instructional design models are demanding and require time and experience for their effective application. But, instructional design needs not always to be ambitious and complex" (Hauske, 2007, p. 1565). Online courses encourage development of new learning and teaching techniques (Gayton & McEwen, 2007).

Researchers believe the use of technology itself can be a motivating factor (Huett, Kalinowski et al., 2008; Keller & Suzuki, 2004; Scribner, 2007) and continues to influence changes and growth in distance education (Daymont & Blau, 2008) as long as the user does not encounter difficulties with the technology (Margueratt, 2007). Appropriately used technology in online courses has the potential to change the presentation of materials and access to resources, change style and amount of interactions, and increase the variety of digital media (Huett, Moller, Foshay et al., 2008; Tarari et al., 2008). In some instances, the introduction of inappropriate technology can be detrimental if the learner has difficulty understanding or using it (Margueratt, 2007).

The task of motivating the learner to engage in the learning process is a responsibility of the instructional designer (Brennan, 2002; Huett, 2006; Huett, Kalinowski et al., 2008). Highly motivated learners contribute quality instructional design as being crucial for a successful learning experience (Ahern et al., 2006) even though the quality of online instructional materials remains an issue (Hauske, 2007). The implementation of instructional strategies to initiate or promote motivation in web-based learners can address issues of attention, relevance, confidence, and satisfaction. These strategies can include media selection and usage, motivational email messages, asynchronous discussions and educational video games. The use of digital media continue to evolve, broadening the communication process and allowing individuals access to information through increasingly sophisticated methods (Alonso et al., 2008; Fazioli, 2009; Kebritchi, 2008).

Implementing multiple media makes it possible to accommodate individual differences in learning, and increase motivation (Astleitner & Weisner, 2004; Ivers &

Barron, 1998; Johnson & Aragon, 2003; Kommaraju & Karau, 2008). Huett, Moller, Foshay and Coleman refer to distance education initiatives as serving the homogenous group of learners of any modality (2008). There are a variety of instructional media available to present information. “Selecting a medium that motivates learners is an important consideration” (Rodgers & Withrow-Thorton, 2005, p333)

Alessi and Trollip (2001) suggest that a multimedia design approach to instruction can avoid learner boredom, and contribute to higher motivation (Choi & Johnson, 2005; Fenrich, 1997; Neo & Neo, 2009) while leading to increased learning (Yang, Huang, Tsai, Chun & Wu; 2009). As Fazioli (2009) points out, “multimedia involves the integrated coordination and presentation of information represented as continuous media data, in addition to information encoded as discrete media data” (p. 14). The media used should provide diverse opportunities to encourage learning from multiple perspectives (Choi & Johnson, 2005; Margueratt, 2007; Mayer, 2001; Scribner, 2007). Multimedia presentations can transform presentations from a passive experience to one that is more engaging (Choi & Johnson, 2005; Webster, 1997).

The primary purpose of media is to facilitate communication (Margueratt, 2007). Mayer (2001) reinforces that media is merely a method of communication or a vehicle for information, and that there should be an emphasis made in choosing a medium that best communicates that information. Choi & Johnson continue by stating that the proper choice of media may impact the learner’s retention of instruction as well as enhancing learners’ motivation (2000). For example, video “that provides attention, relevance, confidence, and satisfaction should be able to promote learners’ motivation” (Choi & Johnson, 2005, p. 218). Ahern et al. (2006) found in a review of literature that motion

media enhanced recall over still images. Graphics can be used to aid in visualization which can lead to a better understanding of the material (Hauske, 2007; Mupringa et al., 2006). Graphics and audio combined can be used to gain the learner's attention and convey ideas more easily than verbal descriptions (Mupringa et al., 2006). Abstract processes can be explained more easily with step-by-step animations (Hauske, 2007).

Another method for motivating learners is the use of motivational email messages. Email is considered a reusable motivational object that is scalable in terms of instructional efficiency (Huett, Kalinowski et al., 2008; Keller, 2008; Kim, 2008; Kim & Keller, 2008). Learners may be motivated extrinsically by grade and course credits but may lack the intrinsic motivation to acquire the knowledge and skills from the learning activity (Keller, 2008; Kim, 2008). Kim states that these email messages can stimulate learner reflection of a task (2008). Email can be used to provide an individualized support system for motivation when the construction is based on one of the ARCS Model four dimensions (Huett, Kalinowski et al., 2008; Keller, 2008, Kim, 2008; Kim & Keller, 2008). The attention-enhanced message incorporates tactics to stimulate interest and curiosity about the subject matter (ChanLin, 2009; Kim, 2008). Attention is incorporated by addressing the learner by name (Kim & Keller, 2008). The relevance-enhanced message uses tactics to relate the subject matter to the learner's situation (Kim, 2008). Relevance is incorporated by including information personalized or directly related to the learner (Kim & Keller, 2008). The confidence-enhanced message utilizes tactics to reinforce to the learner that their goals are achievable upon carefully reading the suggestions provided (Kim, 2008). Confidence is incorporated by encouraging the learner in the email that their goal can be achieved (Kim & Keller, 2008). The satisfaction -

enhanced message implements tactics to illustrate what the learner would gain after accepting and using the strategies provided (Kim, 2008).

The motivational email messages should be sent regularly to highlight approaching deadlines (ChanLin, 2009; Huett, Moller, Foshay et al., 2008; Keller, 1999; Margueratt, 2007), to remind the learner of goals (Huett, Moller, Foshay et al., 2008; Keller, 1999; Larkin-Hein, 2001), and to encourage the learners in their pursuit (Huett, Moller, Foshay et al., 2008; Keller, 1999; Scribner, 2007). A study by ChanLin (2009) found that learners stayed on track through a course with the use of frequent reminders. Learners who have goals are likely to have an increased sense of self-worth while engaging in tasks necessary to achieve the goal (Fazioli, 2009). The messages can also establish communication (Scribner, 2007) which can be maintained (ChanLin, 2009) and improve interaction between the instructor and learner (Kim & Keller, 2008), reinforcing the concept that the learners are not alone in the course, or the learning process, and that there is a support system in place for learners in web-based learning environments. Kim and Keller (2008) found that learner motivation increases with the use of emails that include a personal message relating to the individual. There was a significant increase in measurable learner confidence when the learners received a personal message (Kim & Keller, 2008), thus reinforcing that there was a support system in place to aid them in succeeding in the course. Huett, Kalinowski, et al. (2009) state that there is no difference in the response of the learners to mass messages versus personalized messages.

Online interactions with peers and instructors can play an important role in learner engagement. Online asynchronous discussions remove the disruption caused in a face-to-face classroom encounter where students vie for the opportunity to speak. These

components offer an advantage to students who prefer written communication to oral communication (Daymont & Blau, 2008). Asynchronous discussions also allow for a convenience factor where the learners have time to reflect on messages before responding (Ahern et al., 2006). This additional time contributes to meaningful and reflective interactions (Tarari et al., 2008). However, without participation criteria, engagement can lessen (Hathaway, 2009). Learners can be distracted from academic learning by nonacademic interaction with classmates (Ahern et al., 2006). Mupringa et al. (2006) suggests that learners with the highest levels of interactions with instructor have highest level of learning. Online learners expect regular communication with professor as they need to feel that they are important and valued the same as with traditional face-to-face classroom courses (Mupringa et al., 2006). Learners tend to feel isolated due to the separation by time and space from the instructor (Huett, Moller, Foshay et al., 2008; Song, 2000).

Educational video games and simulations can be incorporated into instruction to facilitate learning (Ally, 2004) and hold the potential for improving web-based learning (Moreno, 2007). Innovations in technology increase the possibility of using simulation and games to develop educational materials (Rust, 2006). Games can provide a novelty effect by gaining and sustaining the users attention (Balaban-Sali, 2008; Huett, 2006; Huett, Kalinowski et al., 2008; Oh, 2006) however, they need to be flexible and interactive (Scribner, 2007). Video games can also help learners remain engaged (Daniels, 2008; Blunt, 2006; ; Gabrielle, 2003Kumarawadu, 2004) although, in order for games to be engaging, they require user participation (Kahveci, 2005) typically through interaction.

The high level of interactivity of most game environments provides the potential to increase the learner's motivation (Ally, 2004; Blunt, 2006; Kahveci, 2005; Moreno & Mayer, 2005). The interactive nature of games introduces discovery learning (Clem, 2005; Githens, 2007; Moreno, 2005; Moreno, 2006) allowing the learner to experiment and to test the environments of the game (Blunt, 2006). Interactive game environments are considered a kinesthetic experience which is naturally motivating (Roberts et al., 2000) and fosters cognitive processes of selection, organization, and the integration in learners (Moreno, 2005)

The use of educational video games appears to enhance and increase student motivation through increased engagement (Daniels, 2008; Blunt, 2006; Fleming, 2005; Gros, 2007; Johnson & Aragon, 2003; Moreno & Mayer, 2005; Scribner, 2007). Studies by Scribner (2007) and Kebritchi (2008) found that student motivation scores significantly improved after playing games related to instructional content. The students perceived the games as beneficial and motivating (Scribner, 2007). "It is theorized that games intrinsically motivate 21st century students who grew up with technology." (Scribner, 2007, p. 39). The new generation of online learners is not solely motivated through the manner in which the information is presented (Fazioli, 2009). Students are becoming increasingly accustomed and skilled with digital technologies (Tomalin, 2006), as there appears to be an increased comfort level with technology which reflects the extent to which games are motivating (Scribner, 2007).

Summary

The review of literature suggests that incorporating motivational elements and strategies as a regular part of the instructional design process will assist instructional designers in creating Internet-based courses that learners will find motivating. It is important for instructional designers to understand both who the learners are and what motivates them to learn (Huett , 2006; Huett, Kalinowski et al., 2008; Huett, Moller, Forshay et al., 2008; Keller, 2006; Margueratt, 2007; Scribner, 2007) and to achieve (Fazioli, 2009; Huang, 2008; Huett, 2006; Paas et al., 2005; Sperry, 2009). Integrating appropriate motivational elements effectively will help to increase the learners' engagement in and persistence in learning by increasing their attention to the instruction, understanding of the relevance of the material, confidence in their capabilities for learning the material, and satisfaction with the overall learning experience.

CHAPTER 3. METHODOLOGY

Introduction

Chapter 3 outlines the research methodology employed in the proposed study. The chapter is divided into five sections and will discuss (a) methodology and design, (b) population and sampling, (c) instruments used, (d) data collection and procedures, and (e) data analysis plans.

This study was designed to determine the motivational instructional strategies that online students at a public university in the state of Georgia perceive as motivating. This question was addressed through the following research questions:

Research Question 1: What instructional strategies do undergraduate college students perceive will motivate them to engage in learning in a web-based learning environment?

Research question 2: What instructional strategies do undergraduate college students perceive will motivate them to persist in learning in a web-based learning environment?

Understanding the instructional elements that students perceive as motivating will assist future instructional designers in their efforts to create a more effective online learning environment. This study will aid administration, faculty, instructional designers and support staff of higher education institutions in the selection of appropriate strategies for online instruction.

Methodology and Design

Descriptive research methodology was used to identify instructional elements found to be motivational by undergraduate online students. This study was conducted using a convenience sample procedure, recruiting volunteer participants who had enrolled in one or more online undergraduate courses at a public university in the state of Georgia. A statistical analysis was conducted of the scaled student responses. In addition, open-ended questions were included to solicit unscripted student comments. The resulting comments were compiled and thematically categorized.

The data collection for the survey utilized a web application that allowed the participants to contribute their individual information without supervision. Each member of the sample group was subject to identical treatments and data collection techniques.

Population and Sampling

The purpose of this study was to identify instructional strategies used in web-based instruction that learners perceived as supporting their motivation to engage in learning and persist in learning. The sample for this study consisted of undergraduate college students enrolled in online courses at a public university in the state of Georgia. The students qualified to participate in this study had previously enrolled in one or more online undergraduate college courses. The population of undergraduate students at this institution in the fall of 2009 was approximately 5,600 (“Semester Enrollment Report,”

2009) and dropped to approximately 5,300 in the spring of 2010 (“Semester Enrollment Report,” 2010). The students who were invited to participate were actively enrolled during the time frame of the study and had completed one or more online courses during their undergraduate college career.

The sample for this study was composed of volunteers who accurately completed the survey. The sample was selected by the following process. Students were invited to participate in the study by way of an email sent to the entire undergraduate student population. The contents of the email described the study and provided a hyperlink to the consent form for participation in the study.

Instrument

The instrument used in this study was a modified version of the Motivation Survey developed by Scribner in 2007 (Appendix A). The language of the survey was modified to reflect the population of this study.

The Motivation Survey focused on the “student’s current perceptions about whether the elements that learning and motivational theorists have identified to be important elements are, in fact, motivational to today’s students” (Scribner, 2007, p. 53). The survey includes response options formatted in a Likert-type scale for levels of agreement as well as open-ended questions.

Scribner stated that a major limitation in the original study was the small sample size which consisted of 202 respondents. Gall, Gall, and Borg (2003) state that by increasing the sample size, the statistical power of the study is automatically increased as

the research participants' scores on the measured variables will be more representative of the overall population scores. With a larger sample size, there is a smaller difference or effect needed to reject the null hypothesis (Gall, Gall, & Borg, 2003).

The questions were intended to obtaining the student's opinions or attitudes regarding levels of agreement which were limited to a five-point scale: strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree. Scribner questions used a four-point scale and instructed the students to skip any question if their position was not adequately described by a provided response (D. Scribner, personal communication, April 20, 2008). This essentially provided a neutral response for the respondent. The revised survey was modified to include a neutral or undecided option (neither agree nor disagree) for learners who were unsure of their positions on a particular question. To ensure that questions were not skipped, accidentally or otherwise, all questions were defined in the collection tool as "required," or necessary, for the successful submission of the survey. If a participant failed to answer one of the survey questions, the survey tool would inform the participant of the skipped question and provide a visual cue to identify the skipped question.

Scribner designed the survey questions to address learner perceptions relating to motivation to engage and/or persist in learning when participating in web-based courses. The survey was originally created in sections to direct the learner's attention to the categories which were indicated by research to address motivation to engage and/or persist in learning. The six sections of the survey were: (1) grades as motivators; (2) course layout as a vehicle for motivation; (3) course delivery strategies and motivation; (4) aspects of the course that are perceived as interesting by the participant; (5) the role

and impact of the instructor and fellow learners; and (6) aspects of online class that motivate. Table 1 summarizes the relationships of the survey questions to the research questions.

Table 1. Relationship of Survey Question to Research Questions

Research Questions	Survey Questions
Engage	4,5,6,8,9,13,14
Persist	2,3,12,15,16,21,22,23,24
Engage and/or Persist	1,7,10,11,17,18,19,20,25

Note . From “High school students’ perceptions: Supporting motivation to engage and persist in learning” by D. Scribner, 2007, p. 54. Doctoral dissertation, Capella University. Reproduced with permission of author.

The open-ended questions from Scribner’s original survey were used to allow the students to respond using their own words and personally reflective responses. The open-ended questions are as follows:

Question 8. “When I log into my online class the first thing I do after reading the announcements is...”

Question 17. “In school, I become bored when...”

Question 18. “I find a course to be interesting when...”

Question 25. “The one, most important aspect of my online class that motivates me to learn is...”

The last five questions of the survey were originally intended to collect demographic information from high school students. These questions were modified to

more accurately reflect undergraduate college student responses. Question 27 was revised from “What grade are you in: 9th, 10th, 11th, 12th, other” to “Select your academic classification: freshman, sophomore, junior, senior, not sure.”

Question 28 was changed from “How many online courses have you taken which were not through Virtual High School?: None, One, Two, Three, Four or more” to “How many online college courses have you taken in your college career?: 0, 1-2, 3-4, 5 or more, not sure.”

Scribner’s original question 29 asked “How many online courses have you taken which were not through Virtual High School?” This question was deleted as it is not appropriate for this study. The same basic information was collected by the revised question 28. Scribner’s question 30 moves up one position and asked “What phrase would you use to describe yourself?: I am an A student, I am a B student, I am a C student, Other, Not sure.”

A question was added to ask the participant to “Enter the year you were born.” The individual’s birth year was used to determine if the participants’ age was above or below 24 years of age defining the student as traditionally or non-traditionally aged.

In order to prevent bias and to protect their identities, the survey instrument did not ask the participants to provide any personal information such as name, birth date, or contact information. The survey was designed to be completely anonymous and self-reporting. The participation in the study was voluntary and participants could exit the survey at any time without submitting their responses.

Validity and Reliability

The Motivation Survey utilized in this research had been validated through testing in original study in 2007. During Scribner's study, question reliability and instrument validity was established through a pilot test utilizing participants of similar age and background to the research participants. Modifications were made to Scribner's original survey tool based on the suggestions and feedback of the original pilot test participants. For the purposes of this study, there were no significant changes made to Scribner's Motivation Survey therefore maintaining the content validity.

Procedures

A request for volunteers was sent to the undergraduate student population of a public university in the state of Georgia through the student email distribution service. The students who decided to participate in the study could follow the link provided in the recruitment email. The link provided the URL for the students to access the informed consent page. The informed consent page explained who the researcher was and the purpose of the research as well as the institution for which the research was being conducted. Information was also provided explaining the steps necessary to participate in the study, the associated risks of the study, and the benefits and compensations of the study. The informed consent page continued, explaining that confidentiality was maintained by not collecting any personal information from the participants during the study and that participation in the study was strictly voluntary. If the student decided to participate, they were instructed to select the "I agree to participate" button which would

navigate them to the survey. In the event a student did not wish to participate, instructions were provided stating that they could close the browser window at any point, ending their participation without submitting their data.

Once the participants navigated to the survey, they were presented all 30 survey questions. The participants were instructed to submit the survey after answering all 30 survey questions. Upon completing and submitting the survey, the participant was presented with a page that acknowledged the successful submission of their survey and thanked them for their participation. This concluded the survey and instructions were provided encouraging the participant to close the browser window to ensure that all connections to the survey tool have been terminated.

Data Collection

Data collection was conducted by means of an online, self-administered survey. The survey was hosted by a subscription-based online survey service. The service allows researchers to create surveys to collect and store data. Upon the completion of the study, the researcher downloaded the data. The participant's responses were recorded just as they were reported.

The data collection was completed during the spring semester of 2010. The tool was accessible to students for a total of two weeks. At the end of the two weeks the records were retrieved and stored on the researcher's computer while all of the survey data was erased from the web application. The records were initially reviewed to determine if the number of successful participants provided a substantial sample.

Data Analysis Plan

The information collected through the Motivation Survey (Scribner, 2007) was analyzed as it was recorded except for age. The participant's age was calculated by subtracting the recorded year of birth from the current year to determine the participants' age at the time of the survey. Initial data analysis determined if each of the participants were at least 18 years of age and had taken one or more online undergraduate college courses. After eliminating incomplete submissions, it was determined that the sample size was greater than Scribner's original study and was adequate for the remainder of this study. The data was inserted into an analysis tool created by the researcher for this study. Additional statistical information about the participants' age such as the average age was calculated from the collected data.

The ordinal data from the Likert-type responses of the survey were compiled into frequency tables. Anecdotal responses from the open-ended questions were categorized by themes.

CHAPTER 4. DATA COLLECTION AND ANALYSIS

Introduction

This study was designed to answer two research questions: (1) What instructional strategies do undergraduate college students perceive will motivate them to engage in learning in an online learning environment? (2) What instructional strategies do undergraduate college students perceive will motivate persist in learning in an online learning environment? Undergraduate students at a public university in the state of Georgia were invited to participate in the study by email. The data was collected through a 30-item online survey. The first 25 questions replicated Scribner's original survey questions. The remaining five questions were based on Scribner's demographic questions, but were modified to reflect the different population.

During the spring semester of 2010, there were approximately 5,300 undergraduate students enrolled at the research site ("Semester Enrollment Report," 2010). The email was distributed to the entire undergraduate student population asking for their voluntary and anonymous participation in the study. The data collection for the study took place over a two-week period. Upon the conclusion of this time period, the data removed from the online application and the survey was deleted. A total of 268 students participated in the study. Twelve survey submissions were removed from the data analysis for being incomplete and another eight removed for never having taken an online course. This means that 4.45% of the students who were invited to participate completed a survey.

The remainder of Chapter 4 presents the results of the study and the analysis of the data.

Data Collection Method

The survey was conducted using a subscription-based online survey application which enables users to create tools for data collection. Each participant was given a unique identifier when the survey was submitted. The application stores and sorts the data in chronological order based on the unique identifier.

Participant Demographics Data

The participants of this study were undergraduate college students at a public university in the state of Georgia. The majority of the participants ($n=139$, 56%) were female students. Figure 1 summarizes the reported gender of the participants in the study.

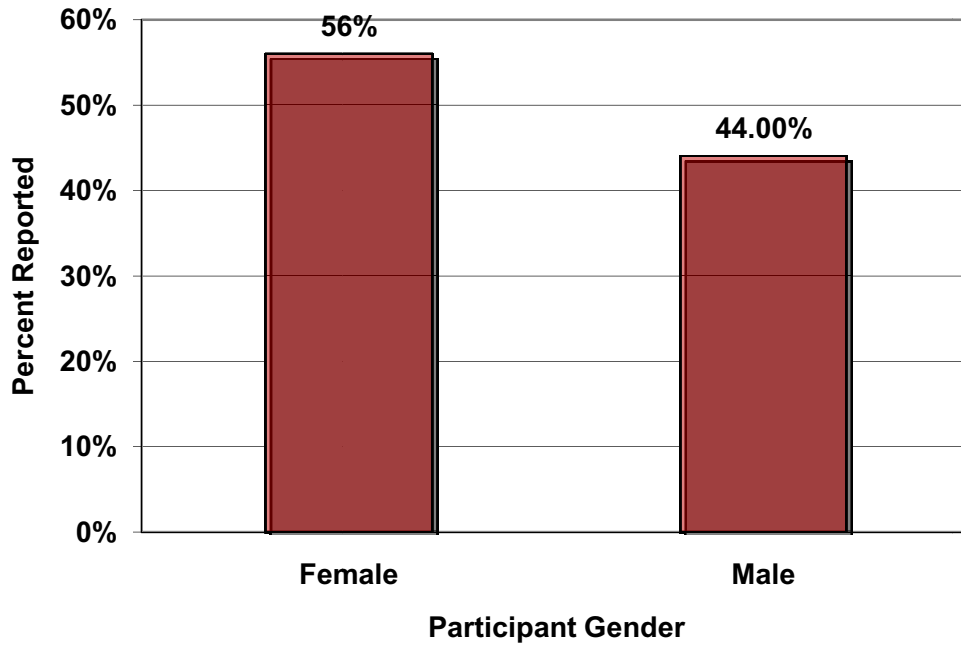


Figure 1. Reported gender of participants

Two hundred and forty-three participants (98%) reported to be between the age of 18 and 24. The remaining five were over the age of 25. Figure 2 summarizes the reported age category of the participants of the study.

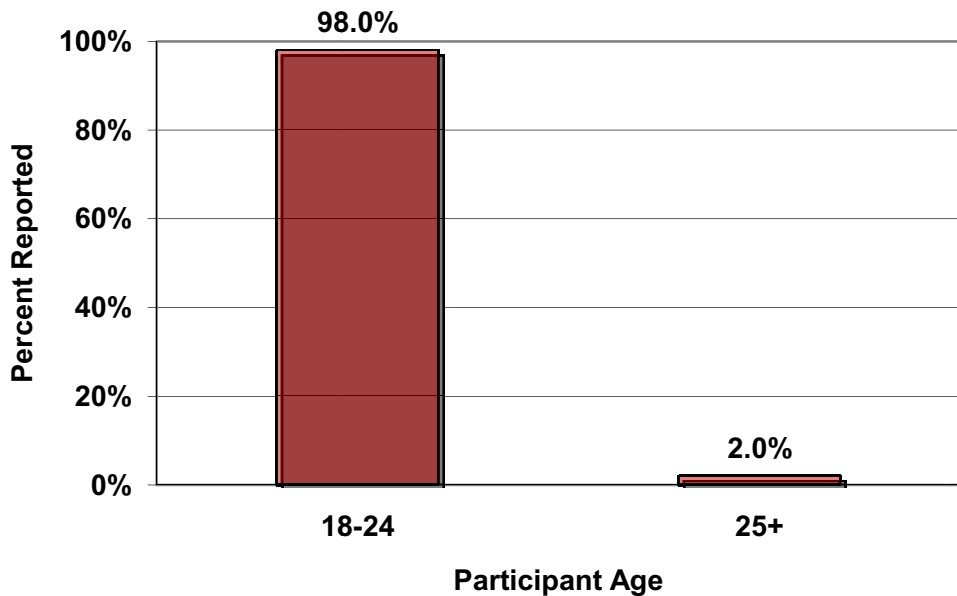


Figure 2. Reported age category of participants

The participants were asked to report their academic classification. One hundred and thirty-eight students (53.91%) reported being seniors, 72 (28.13%) reported that they were juniors, 25 (9.77%) reported that they were sophomores and 12 (6.2%) reported that they were not sure of their academic classification. Eight (3.13%) participants reported being freshmen, but these same students also reported having never taken an online course, so these records were removed from the data. There were 13 participants who were unsure of their academic classification at the time of the study and reported they had completed at least one online course in the past. Figure 3 summarizes the reported academic classification of the participants of the study.

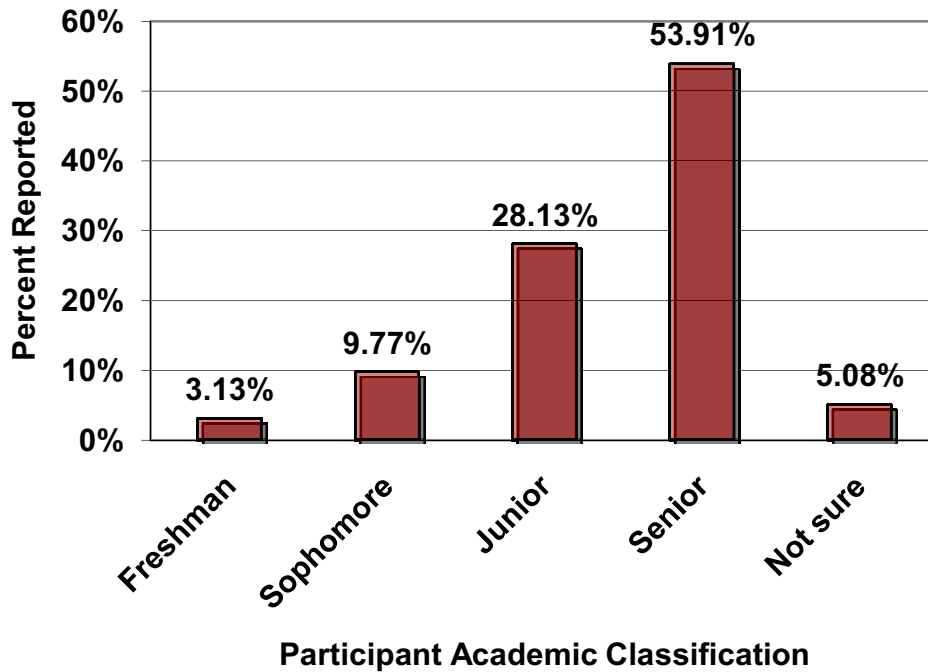


Figure 3. Reported online course experience of participants

The participants were asked to report the number of online courses they have taken in survey question 29. The majority ($n=139$, 54.3%) reported taking five or more online courses. Nearly a quarter ($n=58$, 22.66%) of the participants reported completing three to four courses while 19.92% ($n=51$) reported completing one to two courses. Figure 4 summarizes the reported online course experience of the participants of the study.

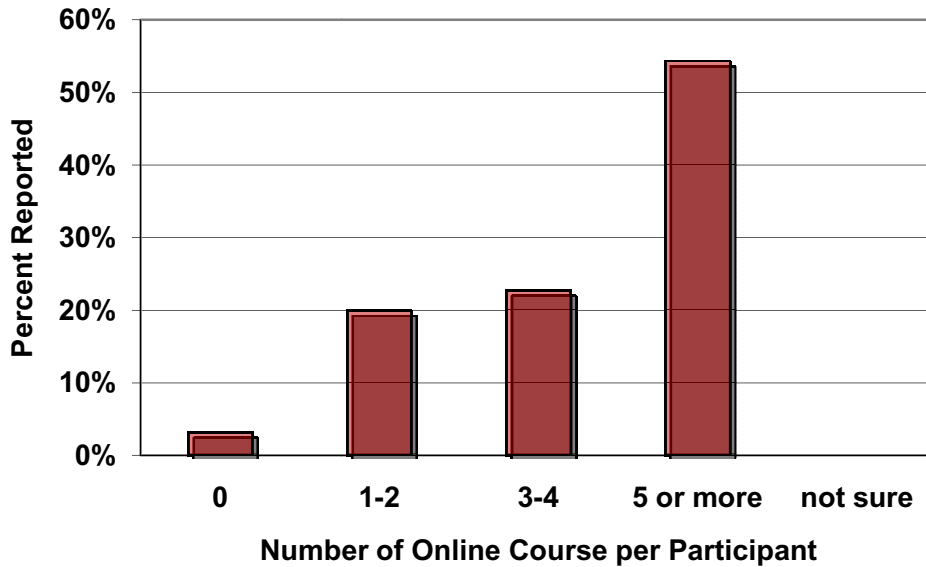


Figure 4. Reported online course experience of participants

A report by the Board of Regents of the University System of Georgia (“Semester Enrollment Report,” 2010) stated that 2.9% of the undergraduate population at this institution was 25 years of age or older. The demographic information collected during the survey supports this statistic as 2.0% of the participants of this study indicated that they were 25 years of age or older. The average age of the participants was calculated as 22.7 years of age and The Board of Regents reported that the average age of this institution was 21.5 years of age. The difference here was due to a higher percentage of seniors and juniors taking online courses than freshman and sophomores. Additionally, the report states that 60% of this university’s population was female compared to the 56% of the respondents of this study.

Survey Question Responses

Scribner's Motivation Survey (Appendix A) divided the survey questions into sections, each section was designed to address aspects of a course that the students may perceive as motivating them to engage in learning and/or persist in learning. The six sections of the survey were labeled as follows: (1) grades as motivators; (2) course layout as a vehicle for motivation; (3) course delivery strategies and motivation; (4) aspects of the course that are perceived as interesting by the participant; (5) the role and impact of the instructor and fellow learners; and (6) aspects of online class that motivate (Scribner, 2007).

Section 1: Grades as Motivators

The first section of the survey collected data pertaining to the participants' perceptions of grades as a motivating factor. The questions were as follows:

1. Grades are important to me.
2. If I receive a poor grade, I work harder to earn a better grade.
3. I work harder on work which is graded than I do on work which is not.

Percentages were calculated for each response of the five-point scale. Table 2 illustrates the numbers of responses (n), the response percent (%) for survey questions one through three.

Table 2. *Grades as Motivators*

Survey Question	Research Question	Strongly Disagree		Disagree		Neither agree nor disagree		Agree		Strongly Agree	
		n	%	n	%	n	%	n	%	n	%
1	E, P	0	0	0	0	0	0	79	31.9	169	68.1
2	P	0	0	0	0	0	0	57	23.0	191	77.0
3	P	0	0	16	6.5	16	6.5	128	51.6	88	35.5

Note. E= engage in learning; Research question 1; P= persist in learning; Research question 2.

Bold indicates majority response.

Both research questions were addressed by the first survey question regarding the importance of grades as a motivating factor. Of the students who stated that grades were important, by either strongly agree, or agree, 53.63% reported being an A student and 38.71% reported being a B student. There were students who reported being a C student ($n=13$) or Other ($n=6$), that indicated that grades were still important to them. This same group, reporting being a C student or Other, indicated in survey question two that receiving a poor grade would still motivate them to work harder for a better grade.

Eighty-seven percent of the respondents to survey question three indicated that they are more motivated to put forth more effort on assignments that are graded (either strongly agree or agree) than those that were not. The students who disagreed (6.5%) with or were neutral (6.5%) to survey question three were a mixture of students reporting to be A or B level students.

Section 2: Content Layout as a Vehicle for Motivation

4. A professional looking course, one whose fonts and formatting are consistent throughout the course and for which all hyperlinks work, contains content which is worth my attention.

5. Pictures and images that pertain to the course content are important for capturing my interest.

6. I become frustrated when I don't know where I need to go in order to get started in the class.

7. It is important that all the material I need to learn is accessible with minimal effort.

8. When I log into my online class the first thing I do after reading the announcements is . . .

Table 3 illustrates the numbers of responses (n), the response percent (%) for each possible response (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) to each survey question four through eight.

Table 3. *Content layout as vehicle for Motivation*

Survey Question	Research Question	Strongly Disagree		Disagree		Neither agree nor disagree		Agree		Strongly Agree	
		n	%	n	%	n	%	n	%	n	%
4	E	0	0	0	0	32	12.9	92	37.1	124	50.0
5	E	0	0	0	0	27	10.9	116	46.8	105	42.3
6	E	0	0	0	0	0	0.0	106	42.7	142	57.3
7	E, P	0	0	0	0	35	14.1	88	35.5	125	50.4
8	E	Open-ended									

Note. E= engage in learning: Research question 1; P= persist in learning: Research question 2.

Bold indicates majority response.

The majority of respondents indicated that a professional appearing course (survey question 4) will gain their attention (87.1%) and that pictures and images (survey question 5) are important for capturing their interest as well (89.11%). None of the participants disagreed with either of these questions. Interestingly, all of the participants indicated in survey question six that they become frustrated when navigation is not clear. Nearly 86% agreed or strongly agreed with question seven that effortless accessibility of materials is an important aspect in minimizing their frustration with a course.

The data relating to research question one suggests that the learners' attention is acquired and maintained by incorporating visual components into the course and course materials, which in turn motivates the learners' to engage in learning. The layout of the course and related materials must be clear and easy to navigate to limit the frustration

experienced with the course. The learner can more easily persist in learning (research question 2) when they do not have to search for information or materials.

Question eight was designed to be open ended allowing the students to provide unscripted responses to “When I log into my online course the first thing I do after reading the announcements is...” One major theme emerged in analyzing the responses. Participants indicated their concern for staying aware of new assignments or approaching due dates for previous assignments. Participants used phrases such as “check calendar,” “look for new assignments,” or “due dates” to describe the action relating to ascertaining new assignments or upcoming due dates. Example comments included participant 7 stating “I tend to check for new assignments”; participant 155: “look for new assignments, quizzes, or lectures that have been posted to double check due dates and make sure I can get to them”; participant 230: “I like to check to see what is due.” Participant 239 stated that “I check to make sure that all assignments for that week have been completed.”

There were a few minor themes of interest. Surprisingly, 7.65% ($n=31$) of the comments from participants specifically mentioned their grades and checking for newly posted grades when all of the participants indicated in survey question one that grades were important. Only 0.51% ($n=2$) suggested having any concern for the activities of their classmates whether it was participant 121 stating “I check to see what classmates having difficulty with” or participant 34 stating “Check the (sic) to see what other class members (sic) doing.” Scribner (2007) indicated that the socialization in an online course was an important aspect with the sample from the original study.

Section 3: Course Delivery Strategies and Motivation

9. I am more motivated to learn in my online class than I am in my face to face class because I am using a computer.

10. It is easier for me to learn new material when it is presented in a mix of presentation styles (text, video, audio, games, PowerPoint, etc.) rather than text alone.

11. It is important for me to know why I am learning something.

12. I am more likely to be motivated to complete a learning activity if I am given a choice of assignments.

13. I need to know what is expected of me before I begin to work.

14. I am more likely to be motivated **to start** an assignment if I feel that the material is not too hard for me to learn.

15. I am more likely to be motivated **to complete** an assignment if I feel that the material is not too hard for me to learn.

16. I am more likely to be motivated to complete my work when I am **not** doing the same thing over and over again.

17. In school, I become bored when . . .

Table 4 illustrates the numbers of responses (n), the response percent (%) for each possible response (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) to each survey question nine through seventeen.

Table 4. *Course Delivery Strategies impact on Motivation*

Survey Question	Research Question	Strongly Disagree		Disagree		Neither agree nor disagree		Agree		Strongly Agree	
		n	%	n	%	n	%	n	%	n	%
9	E	30	12.1	52	21.0	0	0.0	70	28.2	96	38.7
10	E, P	3	1.2	10	4.0	16	6.5	100	40.3	119	48.0
11	E, P	6	2.4	0	0.0	0	0.0	138	55.6	104	41.9
12	P	0	0.0	0	0.0	77	31.1	132	53.2	39	15.7
13	E	0	0.0	19	7.7	22	8.9	128	51.6	79	31.9
14	E	0	0.0	6	2.4	8	3.2	168	67.7	66	26.6
15	P	0	0.0	0	0.0	47	19.0	141	56.9	60	24.2
16	P	0	0.0	0	0.0	18	7.3	118	47.6	112	45.2
17	E, P	Open-ended									

Note. E= engage in learning: Research question 1; P= persist in learning: Research question 2.

Bold indicates majority response.

In relation to research question one, two thirds of the participants (66.9%) indicated by strongly agree or agree in survey question nine that using a computer is a factor for motivating them to engage in learning more in their online courses than in a face-to-face course. Survey question ten had 88.3% strongly agree or agree that it was easier to learn new material when it was not presented solely as text (research questions 1 and 2). Of the 242 participants who prefer more than just text when presented new materials, 197 (89.95%) also indicated that visual components are important in capturing their attention in survey question one. The majority (97.5%) of participants indicated with

survey question 11 that understanding of the relevance of the material is an important aspect that motivates them to engage (research question 1) and persist in learning (research question 2).

Participants (83.5%) stated that having clear expectations for the course and on assignments are crucial for students to engage in learning (research question 1). The majority (94.3%) of participants indicated that they are motivated to engage in learning (research question 1) if they perceive the material as not being too difficult for them to learn (survey question 14). More students (81.1%) agreed, than otherwise, that they are motivated to persist in learning (research question 2) if they perceive the material as not being too difficult for them to learn (survey question 15). Of the participants who would be motivated to start, 83.33% would also be motivated to complete assignments where they perceive the material was not too difficult for them to learn. All ($n=8$) of the neutral responses for survey question 14 also responded in a neutral manner to survey question 15 as well indicating that these participants were consistently neutral regarding the start and completion of assignments based on the appearance of difficulty. A majority of participants (92.8%) indicated with survey question 16 that repetitive assignments do not motivate them to persist in learning (research question 2) through the completion of their work.

Survey question 17 elicited responses to: “I become bored in school when...” Themes that emerged in analyzing the responses were: the repetition of materials previously discussed (20.16%); the instructor reading directly from the materials (16.53%); and lack of enthusiasm from the instructor (18.1%). All three of these themes can result in the students losing interest in the materials being presented and further

lessen their possibility of engaging in learning and/or persisting in learning. These responses provide data to answer both research question one and research question two.

Participant 3 stated “material has to be taught again to people that do not prepare for class.” Participant 7 said “we continue discussions to the next class session and essentially start over.” Participant 13 stated “when the professor goes over the same thing again and again.” Participant 21 said “over explaining simple concepts.” Participant 28 stated “The instructor has a monotone presentation style.” Participant 64 said “I am not learning anything new.”

There were interesting comments that related to the three major themes and offered insight to make a course more interesting. Participant 114 stated “the teacher rambles through story after story, or does not offer any practical application and recites the book or presentations verbatim.” Participant 155 said “I prefer lecturing to be balanced with interaction/student participation.” Participant 205 stated “the professor is not enthusiastic about the course.”

Section 4: Interesting From the Participant Perspective

18. I find a course to be interesting when...

Survey question 18 was open-ended to allow the participants an opportunity to offer insights about the positive experiences that make a course interesting. There were four major themes that emerged; understanding the relevance of the material (25.00%), learning the material (22.18%), including classroom interactions/discussions (20.16%), and having the instructor interested or excited about the subject matter (18.15%).

Relevance of the material was the most prominent theme in survey question 18. Several of the participants made statements about understanding the implications of the material in a real-world setting or how they would be able to apply this information in a job situation. Participant 239 stated “A professor is able to relate real world situations to help the students get a better understanding of problems, etc.”

Many of the students indicated that they are interested in learning or gaining some knowledge from each of the classroom sessions. The statements included phrasing relating to new information, adequate explanations, and not learning for the sake of learning. Participant 23 said

The professor takes an active role in the education process, not just merely giving assignments, and lecturing, but allowing the course to take on an almost fluid structure, keeping within confinements of course but allowing the natural flow of collaboration and discovery to take place.

Participant 254 stated “Ideally, I would like to come out of a class having learned information that I did not know, further my knowledge in topics I have a background in, and thoroughly enjoy every minute of it.”

The theme of interactions and discussions included comments pertaining to active learning experiences in the classroom as well as discussion amongst the instructor and students, and the ability to ask questions without retribution from the instructor or classmates. Participant 188 said “There is teacher feedback and class discussion. With class discussions, it is a little tricky in that you almost have to have two discussions going on at once.” Participant 264 stated “There is (sic) hands on activities and more class discussions.”

Another theme that contributes to an interesting classroom experience was having an instructor who is enthusiastic about the subject matter. Comments were made about instructors appearing bored, lacking excitement or enthusiasm related to being in the classroom, and having little interest in the material. Participant 195 said “when they try to keep my attention.” Participant 267 stated “when the professor shows passion for subject.”

Section 5: The role of the teacher and student peers in motivation

19. I prefer to learn alone at my own rate.

20. I would rather work with a group of my peers who have the same work ethic that I do than work alone.

21. I believe that an involved teacher is important for maintaining my motivation to learn.

22. I am more likely to be interested in a class if I know my classmates.

23. In order for me to continue to work I need to be told that I am doing a good job.

24. It is important that my opinions are valued.

Table 5 illustrates the numbers of responses (n), the response percent (%) for each possible response (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) to each survey question 19 through 24.

Table 5. *Roles of Teachers and Peers in Supporting Motivation*

Survey Question	Research Question	Strongly Disagree		Disagree		Neither agree nor disagree		Agree		Strongly Agree	
		n	%	n	%	n	%	n	%	n	%
19	E, P	15	6.0	0	0.0	5	2.0	157	63.3	71	28.6
20	E, P	128	51.6	94	37.9	9	3.6	12	4.8	5	2.0
21	P	0	0.0	5	2.0	0	0.0	140	56.5	103	41.5
22	P	26	10.5	153	61.7	6	2.4	44	17.7	19	7.7
23	P	15	6.0	0	0.0	10	4.0	196	79.0	27	10.9
24	P	0	0.0	0	0.0	13	5.2	110	44.4	125	50.4

Note. E= engage in learning; Research question 1; P= persist in learning; Research question 2.

Bold indicates majority response.

Survey question 19 begins the section about the role of instructors and peers on motivation in a learning environment. When asked if they prefer to learn individually at their own rate, 91.9% indicated that they do. The concept of working in or with groups of peers (survey question 20) was not popular as 89.5% would prefer not to. Of the participants who prefer to work on an individual basis, 206 (90.35%) also reject working in groups. The majority (98.0%) of the participants agreed with survey question 21 that having an involved instructor was important for maintaining the individual's motivation to persist in learning (research question 2).

Seventy-two percent of the participants (survey question 22) are less likely to have any additional interested in a class if they know their classmates. Only 25.5% express interest in knowing more about their classmates. Of those who prefer to work alone (survey question 19), 71.05% ($n=162$) indicate no interest in knowing their

classmates. Also, 179 participants indicated that grades (survey question 1) were more important than knowing their classmates.

Feedback (survey question 23) was indicated as being an important factor in motivating students to persist in learning (research question 2), 89.9% agreed. There were 72 (29%) unique comments made in survey questions 18 and 25 regarding the importance of feedback to the students, be it comments or grades.

The majority of participants agreed (94.8%) that it was important that their opinions are valued by the instructor (survey question 24). Additionally, there were 212 participants (85.48%) that stated, by agreeing or strongly agreeing in all three responses, that involvement from instructor (survey question 21), feedback from the instructor (survey question 23), and respect from the instructor (survey question 24) are important in motivating them to engage in learning (research question 1) and persist in learning (research question 2).

Section 6: Aspects of Online Class That Motivate

25. The one, most important, aspect of my online class that motivates me to learn is...

The last section addressed aspects of online courses that motivate where participants were asked to contemplate: “The one, most important, aspect of my online class that motivates me to learn is...” This open-ended question was intended to allow participants to provide a non-scripted response based solely on their perceptions. Participants named several aspects that included time, instruction and completion.

Time was a broad category of statements that included flexibility, convenience, use of time and self-pacing. Flexibility was specifically named by participants as having the option to work on course related activities on their own time when their schedule allowed. Convenience was also mentioned in conjunction with flexibility. A major theme of convenience was the option of not physically being on campus to participate in the course. Several students mentioned that online courses gave them the power to control the use of their time. Instead of sitting in a classroom setting for a specified amount of time, they could allocate as much time as needed to the subject matter, usually indicated as being less time than a class session, and proceed to other courses or activities. The use of time extends into the manner in which the students pace themselves through the course materials. Over 19% of the participants indicated that they could attend to the course for as little or as long as they desired and still out pace a classroom based course. Some indicated that they would work ahead when their schedules permitted to prepare for an occasion when they could not dedicate as much time to the course.

Participant 36 stated that “I don't have to stay with the class as far as learning the material.” Participant 54 said “Since it is online, the student is in complete control on how to use time wisely.” Participant 64 indicated “I am able to work around my schedule.” Participant 176 affirmed “I can work ahead just in case something comes up later.” Participant 212's entire comment was “Working at my pace.” Participant 249 indicated “I can spend the time I need on the course, not what is forced on me by the professor.”

Participants mentioned online courses to be an alternative to classroom settings. Over 19% stated that they could learn just as easily in an online course and gained some enjoyment from the experience.

Participant 19 stated “Knowing that I have to take the initiative since I dont (sic) have an instructor telling me what to do.” Participant 26 said “when I feel that I don't really need a teacher for the class.” Participant 28 indicated “The thought that I am for the most part teaching myself and not as reliant on the professor.” Participant 232 affirmed “Because I have the luxury of not having to drive to class.”

Several participants mentioned the presentation and organization of materials in online courses as being different than face-to-face courses. The alternative presentation of classroom materials online was discussed as interesting and useful particularly when students wanted access to materials for remediation or clarification. The use of media or multimedia was also mentioned as an intriguing method for replacing classroom lectures.

Participant 7 stated “there are plenty of documents provided to use as a guide.” Participant 8 said “That I can go back a (sic) see again how to do something I have forgotten.” Participant 223 indicated “If I need to go over something, the material is already there for me, powerpoints (sic), discussions that go on with the rest of the online classes.”

A popular motivation for many college students was the completion of their degree, which was mentioned in several of the responses. Online courses serve as a method to complete their degrees in a timely manner; to earn the credits and graduate.

Participant 10 affirmed “to graduate in 4 years!” Participant 45 stated “I need it to graduate.” Participant 200 clarified “My desire to successfully complete the course and graduate on time.”

Summary

Approximately 5,300 undergraduate students from a public university in the state of Georgia were invited to participate in this study and 248 successfully completed the survey. The responses from the participants provide insight into identifying instructional strategies that students perceive will motivate them to engage and persist in learning in web-based instruction. Students revealed that they perceive the visual aspects of a course to affect their motivation. The layout of a class site, the organization of materials and use of media increases the likelihood that students will initially engage and continue in learning. This sample stated that the social aspect of online courses was not as important as found with Scribner’s original study. The majority of the participants preferred to work individually at their own rate and rejected the need to work with or know peers.

Understanding the relevance of the subject matter, related materials, and how this information could be applied in real-world situations was another aspect that the respondents found motivating. Although participants indicated that they do want to learn the material, the premise was not to learn it for the sake of learning. Participants indicated that instructor involvement was important for motivating them to engage and persist in learning. Respondents emphasized the importance of feedback and comments from the instructor to keep the students informed of their progress as the ultimate goal was to

successfully complete the course. This group of students also prefers online courses for the time related benefits in flexibility and convenience that they offer.

The results of the data will be discussed further in Chapter 5 in terms of the specific research questions. Chapter 5 will include the conclusions of the study and suggestions for further research.

CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Chapter 5 presents the summary of the study, the discussion of the research questions, the study limitations, the recommendations for future studies and the summarized conclusions reached through the analysis of the data collected from the study.

Summary of Study

With the growing number of personal computers and the increased accessibility to the Internet, web-based distance education became more logical both to educational institutions and prospective students. However, constant debate overshadowed the viability of web based courses and the technology needed to implement these courses. These technologies act as agents of transformation in education (Curran, 2001) as the technology required for the majority of web-based courses now is not much different than the technology that most students already have at home (Cummins, Brown, & Sayers, 2007; Compton & Schock, 2000).

Motivating students to achieve in web-based courses is a topic of practical concern to instructional designers (Paas et al., 2005). It is important to understand both who the learners are and what motivates them to learn. (Margueratt, 2007; Scribner, 2007). Instructional designers need to consider instructional strategies that appeal to

online learners' motivational needs and expectations (Scribner, 2007; Paas et al., 2005). Understanding the strategies that motivate learners and attending to those strategies in the instructional design process will likely lead to increased engagement and persistence (Margueratt, 2007; Scribner, 2007; Vafa, 2002) in web-based learning environments. Instructional design of a course should support the instructional and motivational needs of the learners (Scribner, 2007). In order for this to be accomplished, the instructional elements that learners perceive as motivating have to be identified and integrated into the course design (Scribner, 2007).

The review of literature suggested elements of instruction that may contribute to increased motivation to learn in web-based instruction (Margueratt, 2007; Scribner, 2007; Huett, 2006). The elements include the integration of technology, the use of supportive messages, and the incorporation of multimedia into instruction. The literature supports the use of these elements contributing to the potential increase of learner motivation however there is a lack of research addressing the perceptions of undergraduate learners as to the value of these instructional elements.

The purpose of this study was to identify motivational strategies to engage undergraduate learners in web-based instruction. The research questions that were answered in this study were:

1. What instructional strategies do undergraduate college students perceive will motivate them to engage in learning in an online learning environment?
2. What instructional strategies do undergraduate college students perceive will motivate them to persist in learning in an online learning environment?

The data was collected through a set of survey questions originally created by Scribner in 2007. The survey questions were modified for this study to address a population that was different than Scribner's original study. The survey questions addressed grades, content layout and availability, delivery strategies for course content, and the role of instructors and peers in the learning environment. There were also four open ended questions designed to elicit participant responses regarding the student's initial activities when entering the online class environment and the aspects of instruction that are perceived as boring, interesting and motivational.

The entire undergraduate population at a public university in the state of Georgia was invited to participate in this study. The survey remained available for two weeks. There were 268 responses total; of those, 248 were complete and submitted by students who had participated in one or more web-based course. This resulted in an overall response rate of 4.4%.

Limitations

One limitation that was experienced with this study was that students from only a single institution in the southeast region of the United States were included in this study. Conducting this study with a single institution provides a narrow view of the data. The data was biased by the limited experiences of the students at this institution. Increasing the number of institutions that participate in studies like this will provide a broader picture of learner perceptions.

Another limitation was that all of the data was gathered at a single point in time. This snapshot of data only reflects the participants' perceptions at this point in time. If the

same study were done with the same students at multiple intervals throughout a semester, the data might show that perceptions change based on experiences in a single web-based course. These experiences might be a reflection of the instructor, the subject or the manner in which the instructional materials are presented. The possibility of conducting this study with the same students over several semesters might reveal even more as their perceptions change with different instructors and subjects along with different instructional techniques and materials.

Participation in this study was purely voluntary and anonymous, so there was no way to follow up with the participants to further explore their comments or responses. The survey tool was designed and built to encourage the participants to complete the entire survey without unintentionally bypassing a portion of the survey. In the event that an incomplete survey was submitted, the tool would notify the respondent that all of the questions were necessary for research purposes and it would indicate which questions had been bypassed. However, there were still 12 participants who began the survey and did not complete it. It is thought that in this case the participants attempted to submit a partial set of completed questions and were notified but they merely exited the survey while the partial surveys were recorded.

Interpretation of Results

The research states that too often it is assumed that if the instruction is of good quality, motivation will take care of itself (Keller, 1983). Unfortunately, this assumption has been found to be only partly true. Any one of the four aspects of Keller's ARCS Model of Motivation (attention, relevance, confidence, and satisfaction) individually may

not be adequate to keep a learner on task but by incorporating all four into the instructional strategy, the possibility of maintaining the learner's interest is increased (Dick & Carey, 1996).

The review of literature suggests the integration of technology, supportive messages, and multimedia into instruction may contribute to increased motivation in web-based instruction. The survey questions in this study were originally designed to determine the instructional elements that learners perceive as contributing to their motivation to engage and/or persist in instruction. The questions related to grades, content layout, course delivery strategies, and social interactions. In addition, there were four open-ended questions designed to allow the participants to provide non-scripted responses for the activities when they first enter the online course, when they become bored in the course, when they become interested in the course, and their overall motivation in the course.

Researchers believe the use of technology itself can be a motivating factor (Huett, Kalinowski et al., 2008; Scribner, 2007; Keller & Suzuki, 2004) and this belief continues to influence changes and growth in web-based education (Daymont & Blau, 2008) as long as the learner does not encounter difficulties with the technology (Margueratt, 2007). Survey question nine addressed this issue by asking the participants if using a computer for an online course motivated them more than being in a traditional face-to-face course. Over two-thirds of the participants (66.9%) either strongly agreed or agreed. This perception may have to do more with using the computer as a tool for course work as participant 43 stated that "I use Youtube to find more tutorials." Computers and the

Internet have become resources for students to tap into and find and use resources that are beyond those provided by the instructor.

Supportive messages were another element that has proven successful in motivating learners in web-based courses (Huett, 2006). These messages can vary greatly in their content and still maintain the same result. The learners need to feel that the instructor of an online course is involved (survey question 21). Involvement can vary greatly depending on how the course is structured. Supportive messages as a method of communication are scalable in terms of instructional efficiency (Huett, Kalinowski et al., 2008; Keller, 2008; Kim, 2008; Kim & Keller, 2008). These messages can remind learners of approaching deadlines (ChanLin, 2009; Huett, Moller, Foshay et al., 2008; Margueratt, 2007; Keller, 1999), course goals and expectations (Huett, Moller, Foshay et al., 2008; Larkin-Hein, 2001; Keller, 1999), and encourage the learners in their journey (Huett, Moller, Foshay et al., 2008; Scribner, 2007; Keller, 1999). These messages can be sent to the entire class, groups of students or individuals depending on how the instructor uses the tools available. A prominent theme from the participants was the need for feedback informing the learners of their progress in the course. Survey question 23 addressed the issue of feedback to which 79.9% of the participants agreed or strongly agreed that it was necessary for motivation to persist, which provides data to answer research question two. Participants 243 stated “Knwoing (sic) that when I email my professor with a question I am going to get a response within a timely manner” is an important aspect that motivates them to learn in the course.

The use of digital media and multimedia contributes to increased motivation (Neo & Neo, 2009; Kommaraju & Karau, 2008; Choi & Johnson, 2005; Astleitner & Weisner,

2004; Johnson & Aragon, 2003; Alessi & Trollip, 2001; Ivers & Barron, 1998; Fenrich, 1997). The use of media also provides diverse opportunities to encourage learning from a multiple perspectives (Margueratt, 2007; Scribner, 2007; Choi & Johnson, 2005; Mayer, 2001). Media serves as vehicles for content with each vehicle carrying specific cargo, such as text, graphics, motion media, or audio through which content is presented (Bertrand-Hines, 2000). Although media alone does not directly affect learning, media can deliver information that does affect learning if both media and cargo are chosen on solid instructional design principles (Alessi & Trollip, 2001). The manner in which the user interacts with the media can also influence how the learner processes the information (Kozma, 1991). Multimedia presentations offer the ability to alter presentations from passive to engaging experiences. Therefore, a better understanding of the relationships between media and the related interactions, and learning may help instructors and instructional designers choose more appropriate media types, and media combinations, to positively influence how people learn in online courses (Mayer, 2003). Over 20 participants specified how the presentation of information in the course increases their interest (survey question 18) and/or motivates them to learn (survey question 25). Several students indicated that videos were appreciated to compliment the course materials. Participant 56 specifically named “multimedia presentations” as contributing to increase interest in the course. These comments provide data to answer research question one.

The participants in this study indicated that having an active instructor in the online course environment was important for motivating them to engage and persist in learning. These students initiate their online courses rituals by checking for new information and anticipate that the majority of that information to come from the

instructor. Discussions, posts, or responses made by peers did not appear to be as importance as other online interactions to this sample as there were only two comments made in survey question eight that made reference to the activities of classmates in the course environment. The primary communications that the respondents indicated came from the instructor and included newly posted grades, responses to discussions and emails. The reassurance provided by the instructor through assignment related feedback also encourages the learners and instills in them the confidence that they can complete the tasks at hand and ultimately the course.

Students have different reasons for enrolling in online courses. Participants strongly agreed ($n=169$) or agreed ($n=79$) in survey question one that grades and the associated credits hours (survey question 25) were important factors for enrolling in online courses at the research institution. The students perceive the availability of online courses as an important option that contributes to the completion of their degrees. As participant 99 stated “honestly, just getting my degree” and participant 254 said “I have tunnel vision for my bachelor's degree. That's all the motivation I need.” These comments are strong indicators of the importance of the online courses to the students. Grades are important motivators (research question one) but so is striving to earn better grades (research question two), as indicated in survey question two where 100% of the participants agreed or strongly agreed that they would work harder to earn better grades. Earning a grade for completing a task is a form of extrinsic motivation while completing the task for the sake of learning is intrinsic motivation. Although participants did list the act of learning as an important aspect of online courses, grades ranked higher.

The participants in this study indicate that they are paradoxical in terms of online community and the social aspects of an online course. These students rejected the notion of their peers influencing their motivation in a web-based environment. This sample stated that the social aspect of online courses is not as important as found with Scribner's original study. Not only do these students not desire peer socialization in online activities but they also prefer solitary work. One possible reason for this may have to do with this sample being found at a residential university which may offer other opportunities for face-to-face social interactions that are more rewarding.

Participants indicated that course materials that are easily accessible, well organized, professional looking were important in gaining (research question one) and maintaining their attention (research question two). Well organized course materials allow the student to easily find and access information with minimal effort and lowering the potential frustration level that the students may encounter. Organizing materials does not have to be a complex task. By simplifying the organization and presentation of course materials, the student can quickly locate the sought after information and move on to the next activity without delay, making better use of their time. Use natural language, language that the learner can easily understand or is accustomed to, when labeling links and documents. In order for important information to be easily accessible, the student should be able to access the material within a few clicks of the mouse. Avoid creating additional, unnecessary layers between the student and the information. This contributes to frustration which will negatively effect motivation to persist in learning. The organization of materials should be consistent throughout an academic division and from course to

course, regardless of the method in which the course is conducted. This will allow the students to become acquainted with the manner of organization which

For a student to have a clear understanding of expectations for the course and related assignments should be stated simply. When applicable, provide rubrics to the students on how activities will be graded so they might have a better understanding of how the grades are calculated. In an environment where the instructor and student may be separated by both time and geographic location, clear communication is paramount. An asynchronous conversation between instructor and student may take several hour or days depending on the nature of the topic.

The participants indicate that learning activities should be relevant and challenging but should not appear insurmountable. Presenting assignments that appear overly difficult dissuade the students from attempting (research question one) or completing (research question two) the tasks, as indicated in survey questions 14 and 15. Ensuring that students have all of the information necessary to succeed with a learning activity increases their level of confidence. The increase in confidence amplifies the learner's certainty that they have the ability to succeed and control their success. Learner confidence enhances persistence in learning (research question two).

Additionally, respondents acknowledged their disdain for the continued repetition of information during classroom lectures whether it is due to an error on the part of the instructor or for peers who fail to attend lectures. The duplication of previous lecture materials prompts boredom and discourages the students from continued motivation (research question two). Over 20% of the responses to survey question 17 specified repetition as contributing to their boredom in a classroom setting.

During the course of the study, students revealed that they perceive the visual aspects of a course to gain their attention and effect their motivation in a positive manner. The professional appearance of a website and use of visual components increase the likelihood that students will initially engage (research question one) and continue in learning (research question two). There are several ways to integrate additional visual elements without using graphics. The use of visual attributes such as color and size can be used to gain the student's attention and direct their eye to areas of importance. Other visual tools can include the use of contrast, alignment, proximity, stylistic/thematic repetition and consistency. Graphics and motion media, in some cases, communicate ideas more easily or better than text alone. An example would be procedural information. Media can be used to capture experiences or events that can then be distributed online for students to experience. These events might include student presentations, demonstrations, guest lectures, and previous historical events that students may not have experienced firsthand.

Understanding the relevance of the subject matter, related materials, and how this information could be applied in real-world situations was another aspect that the respondents found motivating. Although participants indicated that they do want to learn the material, they were clear in stating that they did not want to learn information solely for the sake of learning, but rather to learn information that can be applied in the future possibly in a career. It is "unrealistic to suggest that students universally engage in learning solely for the joy of the experience, as there is usually some ulterior motive for learning beyond pure satisfaction" (Margueratt, 2007, p31). Relevance should not be implied but needs to be overtly stated. The lack relevance can lead to the student

becoming bored with the materials which discourages persistence in learning (research question two).

The participants of this study also indicated that they enjoyed the flexibility and convenience of enrolling in online courses as many students do. With the limited background information that was collected during the study it is difficult to ascertain the reasons for preferring the flexibility of an online course. Given the demographics of this sample one would not suspect the participants of having families to support or jobs to attend to as non-traditionally aged students would.

The responses to the open-ended questions included several comments on working around busy schedules and spending various amounts of time on the subject as time permitted. Participant 27 stated that “I get to work at my speed.” While participant 50 indicated that they preferred the “Remote capability” of an online course. Participant 64 stated that “I am able to work around my schedule.” Participant 68 confirmed that “I am able to work in the middle of the night,” as many do. Participant 124 indicated generically “the flexibility.” Participant 163 preferred “not being forcing to attend classes when I don't have time or when it is costing me adverse results at work.” Participant 70 enjoyed “not having to drive across town.” Participant 40 stated that they are motivated by “not going to class.”

Conclusions

The findings of this study indicated that the participants prefer their online activities to be void of social activities. These respondents indicated that they are focused

on succeeding when enrolled in online courses. Grades and degree completion are major motivators for this group as they use online courses as a vehicle to maintain a timely pace for graduation. The study participants specified that they do not appreciate repetitive lectures because they viewed this as an inconvenience that contributes to potential boredom, which will lead to a decrease in motivation to engage and persist in learning.

The participants are inclined to complete learning activities at times which are convenient to their schedules as well as the flexibility of not traveling to campus for class. They also indicated the preference for the use of media in a course to enhance the materials. Visual media increases the learner's attention and contributes to their motivation to engage and persist.

Participants revealed that they gained benefit from having an involved instructor in the course, who values the viewpoint of the student and offers encouragement and appropriate feedback pertaining to the students' performance and success. They also signified the importance of understanding the relevance of the course materials and seeing the application of the subject matter in real-world situations. The students are less likely to begin and complete tasks that are seemingly impossible. Providing the students with essential information through well organized and easily accessible materials allows them to succeed on their own at a task. This success increases their confidence and motivates them to persist in learning.

Implications for instructional design

This study provides more data in support of the integration of rich instructional presentations either with video, audio, or interactive characteristics. These media act as

vehicles through which information is communicated. There are new media on the horizon including mobile device applications that have the potential to become commonplace in the foreseeable future.

There may be a need, as indicated by the participants, to offer alternatives for the use of social elements in an online course or to limit their engagement with peers. Soliciting student perceptions is important as it offers insight to the evolving population of students enrolling in online courses. Without the data observed from the perceptions, instructional designers cannot identify how learners are changing through or with the regular integration and usage of technology. In the end, technology is just a vehicle for disseminating information. Clear communication is still the key.

Recommendations

Several notable improvements are apparent for future studies. Future studies of similar structure should include questions inquiring why students enroll in online courses; their overall satisfaction with the online courses that have been taken; and how online courses are meeting student expectations.

Some concern arose from the number of neutral responses to a few of the survey questions. The survey questions should be examined more closely to determine if further clarification is needed or if example responses should be included with the question to illustrate the intended meaning.

As with Scribner's study, this is a small set of data collected at a single institution which presents a narrow view of the population as a whole. Accessing a broader sample

with students from several and various types of institutions (private, public, brick and mortar and online), would provide data to lead to a better understanding of the instructional strategies that motivate students to engage and persist in learning in online courses.

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APPENDIX. ONLINE MOTIVATION SURVEY

From *High School Students' Perceptions: Supporting Motivation To Engage And Persist In Learning*, by Donna E. Scribner, 2007, Doctoral dissertation, Capella University. Copyright 2007 by Donna E. Scribner. Adapted with permission.

This questionnaire is about motivation: what motivates you to start learning new material (engage), and then helps you continue learning (persist). As you read each part, do not think about the way that you are currently taught or the way that your classes are currently structured. Rather answer each part from your own point of view as it relates specifically to the way that you like, or would like, to learn.

This survey is completely anonymous.

You are under no obligation to complete the survey or answer all parts.

1. Grades are important to me

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

2. If I receive a poor grade, I work harder in order to earn a better grade.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

3. I work harder on work which is graded than I do on work which is not.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

4. A professional looking course, one whose fonts and formatting are consistent throughout the course and for which all hyperlinks work, contains content which is worthy of my attention.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

5. Pictures and images that pertain to the course content are important for capturing my interest.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

6. I become frustrated when I don't know where I need to go in order to get started in the class.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

7. It is important that all the material I need to learn is accessible with minimal effort.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

8. Please complete the following: When I log into my online class the first thing I do after reading the announcement is...

[textbox]

9. I am more motivated to learn in my online class than I am in my face to face class because I am using the computer.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

10. I am more interested in what I am learning when the material is presented using a mix of presentation styles (text, audio, video, games, PowerPoint, etc.) rather than text alone.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

11. It is important for me to know why I am learning something.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

12. I am more likely to be motivated to complete a learning activity if I am given a choice of assignments.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

13. I need to know what is expected of me before I can begin to work.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

14. I am more likely to be motivated to *start* an assignment if I feel that the material is not too hard for me to learn.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

15. I am more likely to be motivated to *complete* an assignment if I feel that the material is not too hard for me to learn.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

16. I am more likely to be motivated to complete my work when I am *not* doing the same thing over and over again.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

17. Please complete the following: In a class, I become bored when...

[textbox]

18. I find a course to be interesting when...

[textbox]

19. I prefer to learn alone at my own rate.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

20. I would rather work with a group of my peers who have the same work ethic that I do than work alone.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

21. I believe that an involved instructor is important for maintaining my motivation to learn.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

22. I am more likely to be interested in a class if I know my classmates.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

23. In order for me to continue to work I need to be told that I am doing a good job.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

24. It is important that my opinions are valued.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

25. The one, most important aspect of my online class that motivates me to learn is...

[textbox]

26. Please enter your birth year.

[textbox]

27. Select your gender

- Female
- Male

28. Select your academic classification

- Freshman
- Sophomore
- Junior
- Senior
- Not sure
- Not currently enrolled

29. How many online courses have you taken in your college career?

- 0
- 1-2
- 3-4
- 5 or more
- Not sure

30. What phrase would you use to describe yourself?

- I am an A student
- I am a B student
- I am a C student
- I am a D student
- Not sure