A Descriptive Study of Student Motivation in Online Distance Learning Environments

by

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A Thesis Submitted to the Faculty of the

DEPARTMENT OF AGRICULTURAL EDUCATION

In Partial Fulfillment of the Requirements

For the Degree of

MASTERS OF SCIENCE

In the Graduate College

THE UNIVERSITY OF ARIZONA

2014
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APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

__________________________  ________________

Dr. Robert Torres  Date
ACKNOWLEDGEMENTS

To my committee:

Dr. Matthew Mars: Your humor and support made this achievement possible. I will never forget your kindness and encouragement through this process.

Dr. Ryan Foor: Thank you for supporting me through this trial and error process, and continually guiding me along the path to graduation. Your guidance has helped me progress as a future educator as well as a person in general. I will always be thankful for the lessons you have taught me through our time together.

Dr. Robert Torres: Without you this Master’s degree would not have been possible. Thank you for always taking time out of your schedule to assist me in this endeavor and sticking out some long nights to make my thesis what it is today.

You are all amazing mentors, teachers, and friends and I look forward to our continued work together.

Mom and dad thank you for your encouragement and support through my life.
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Abstract

The immense growth of Internet related technologies have allowed possibilities; students have new technology at their fingertips. Technology has made it possible to merge online teaching and learning into the routine of college and university studies. Online classes are also becoming increasingly more popular with on campus college students because of times constraints of traditional courses. Distance learning is beneficial for eliminating time and money spent related to student travel and allowed Outreach College students access to adept instructors regardless of physical locale. Online courses have also given students a chance to collaborate with professionals worldwide.

There is a variety of factors that are responsible for the success of online learning. Motivation is a key factor of student accomplishment with online courses, just as it is in learning and attainment in a face-to–face setting (Jones & Issroff, 2007). High dropout rates in online courses at the college level have been associated with poor motivation (Muilenburg & Berge, 2005) Motivation impacts how, what, and when individuals learn. Motivation is dynamic and multifaceted with underlying aspects that impact students’ motivation to learn and, therefore, success and in turn affect retention (Brophy, 2010).

The high attrition rate in distance education courses at the college level, have been associated with poor motivation. Low retention rate in distance learning has raised skepticism about the underlying assumption that online learners are as independent, self-directed, and intrinsically motivated as recent studies have lead researchers to believe. This research begs the question, what is the determined stimulation for college student motivation in an online distance-learning environment?
The researcher utilizes descriptive or survey research to attain research objectives. The instrument used was based off of the Situational Intrinsic Motivational Scale (SIMS). This attitude scale is designed to describe participant’s motivational level. The motivational scale moves from Extrinsic Motivation to Intrinsic Regulation on a continuum. Level of student motivation and characteristics are statistically compared to show correlations.
Chapter I

Background

In the last ten years, distance learning has undergone considerable change. Distance learning was once only carried out through extension agents; distance learning was workshops that were put on to educate agriculturalists further. Extension agents would travel to different towns and communities to put these workshops on. With the huge popularity of distance learning, students and universities started to gain interest. Distance learning and teaching has moved away from the periphery view and closer to the center of university life. No longer is distance learning only under the umbrella of extension education (Larreamendy-Joerns & Leinhardt, 2006). The immense growth of Internet related technologies has allowed possibilities that were previously unforeseen. Now, it is possible for students to partake in classes through the university while remaining at home or during travels. They are also becoming increasingly more popular with on campus college students. If a student has two classes they must take that are at the same time, on campus, they can still register for both if at least one is offered online. The growth of the Internet and having new technology at student’s fingertips has resulted in merging online teaching and learning into the routine of college and university studies. Technology has brought new appeal to distance education (Tallent-Runnels et al., 2006). Online learning has an abundance of possibilities to meet the needs of current and future students.

There are many potential benefits of distance learning. Distance learning is beneficial for eliminating time and costs related to student travel, access to adept instructors regardless of physical locale, uniformity of content and, the chance to collaborate with professionals worldwide. Online learning also allows the student
flexibility to access the course at the most opportune times for the individual; these are defining features of online learning (Hollis & Madill, 2006; Trujillo, 2007). There is a variety of factors that are responsible for the success of online learning. Motivation is a crucial aspect of online accomplishment, just as it is in learning and attainment in a face-to-face setting (Jones & Issroff, 2007).

High dropout rates in online courses at the college level have been associated with poor motivation (Muilenburg & Berge, 2005). Student retention and completion rates in distance learning have been extensively studied and argued over since its beginning in 1892 (Crotty, 2012). Conversation has increased the introduction of distance learning and its progression from the periphery view into the mainstream of college life and given earlier modes of distance education and training to a more central role (Berge & Huang, 2004). Research supports attrition from eLearning is currently 70 - 80% (FloodDagger & Wade, 2004). With the growth of distance education, the problem of exceedingly high attrition rates is troubling (Tyler-Smith, 2006). The high attrition rate has caused much debate about the underlying assumption that online learners are as independent, self-directed, and intrinsically motivated as research has lead teachers and researchers to believe (Garrison, 1997).

*Motivation Defined*

A person who feels no impetus or inspiration to act is thus characterized as unmotivated; someone who is energized or activated toward an end goal is considered motivated (Deci, 2000). Motivation is internal and external factors that kindle desire and energy in individuals to be continually interested and devoted to a job, role or subject, or to make an effort to attain a goal. Motivation stems from conscious and unconscious
factors as well as your sense of self, or “the process whereby goal-directed activity is instigated and sustained” (Schunk, 2008 p. 4). Furthermore, motivation can be external or internal and individuals are often motivated by external factors such as reward systems, grades, exams or punishment; Individuals are also motivated from within, by fascinations, inquisitiveness, or a value for the task at hand. Intrinsic motivations are not necessarily rewarded but can sustain excitement, inspiration, and lasting efforts.

Intrinsic motivation has emerged as an important phenomenon for educators—A natural wellspring of learning and achievement that can be systematically accelerated or undermined by parent and teacher practices (Ryan & Stiller, 1991). Additionally, intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that instigate versus undermine it (Deci, 2000).

Motivation impacts how, what, and when students learn. Malmeer and Zoghi’s research on Intrinsic motivation have supported the principle that motivated learners are more likely to commence stimulating undertakings, be more involved, energetically absorbed and adopt a deep approach to learning (Malmeer & Zoghi, 2013). Students display enhanced performance, persistence and ingenuity (Schunk, 2008). Motivation is dependent on many different factors such as thoughts, beliefs, goals, rewards, values, self-efficacy and expectations which link motivation to the student’s cognitive and affective processes. These factors create an interactive association between the learner and the learning atmosphere (Brophy, 2010; Eccles, Wigfield, & Schiefele, 1998). “It is important to know how students develop those competencies and value beliefs, why they may fluctuate from time to time or place to place, and what outcomes evolve from such experiences. The study of beliefs alone cannot adequately answer these questions”
A person’s behavior is dependent on factors such as thoughts, beliefs, goals, rewards, values, self-efficacy and expectations. Observing motivation exclusively as an outcome of the learning environment does not identify that individuals can be motivated to a greater or lesser extent and in distinct ways (Harnett, 2011).

Motivation is dynamic and multifaceted with underlying aspects that impact students’ motivation to learn and therefore, success and in turn affect retention (Brophy, 2010). Recurrently, motivation has been regarded as a characteristic that remains rather constant across contexts and circumstances. Researchers that are adopting this model focus on describing traits of successful online learners. Findings from Harnett’s (2011) comparative study between online students and on-campus learners suggest that online students are more intrinsically motivated than on-campus students at both undergraduate and postgraduate levels. Intrinsic motivation may influence initial engagement and retention in online classes, but “research that treats intrinsic and extrinsic motivation as a dichotomy may present an overly simplistic view of both contextual effects and motivation itself” (Hartnett, 2011, p. 21).

There are various theories about determination in the realm of educational psychology. Self-Determination Theory, made up of five theories: Social Cognitive Theory and Organismic Integration Theory, Conative Evaluation Theory, Goal Contents Theory and Basic Psychological Needs Theory are crucial components of student motivation in a college classroom. Harnett’s research supports that if students’ psychological needs are not met, then they are not intrinsically motivated and in turn,
students’ success in the classroom can significantly drop causing loss of student retention in online learning environments (2011).

**Distance Learning Defined**

“Distance learning is the term used when the delivery of instruction involves the separation of student(s) and the instructor by time and/or space. Some forms of distance learning include correspondence, telecourses, online instruction, computer assisted instruction, and instructional delivery that relies upon satellite, cable, broadcast (TV or radio), the Internet, CD, DVD, or other technologies. These mechanisms enable faculty to provide instruction other than in a scheduled, classroom, face-to-face experience. There are many terms for distance learning, including, but not limited to, distance education, flexible learning, distributed learning, and technology-mediated instruction.” ("What is the," 2008 p. 4)

**Defining Asynchronous and Synchronous Distance Learning**

There exist two types of distance learning: Asynchronous and Synchronous. Asynchronous distance learning is commonly facilitated by a medium such as email or discussion boards. This learning does not necessarily happen at the same time the instructor is teaching or presenting material. Asynchronous learning is a key component of student flexibility in distance education. Many people rely on asynchronous types of classes because of their schedules; students are able to download documents at any time of the day. Individuals communicate with peers and instructor without time constraints, and have more time to present thoughtful work. Individuals are easily able to combine work, family, and education. Synchronous distance learning environments use technology such as video conferencing and chat; Students can communicate at the same time with either the entire class, or the instructor only. Synchronous learning helps students make better personal connections with their peers and instructor. This learning is more social and results in less frustration due to more student questioning. Synchronous learners participate in class sessions, therefore, feeling less isolated. Both
learning methods, asynchronous and synchronous have positive and negative aspects (Hrastinski, 2008).

**Statement of the Problem**

The high attrition rate in distance education courses at the college level, have been associated with poor motivation. Low retention rate in distance learning has raised skepticism about the underlying assumption that online learners are as independent, self-directed, and intrinsically motivated as recent studies have lead researchers to believe. What is the determined stimulation for college student motivation in an online distance-learning environment?

**Purpose of the Study**

The purpose of this study was to describe the level of motivation among students in an online learning environment.

**Research Objectives**

1. Describe students on selected (age, sex, year in school, ethnicity, education, internet access and use) demographic characteristics.
2. Describe synchronous and asynchronous distance learning environments.
3. Describe the type (intrinsic, identified regulation, external regulation or amotivation) of motivation students possess while participating in an online learning environment.
4. Describe the type of motivation by selected student demographic characteristics.

**Significance of the Study**

*Applications*  
This study will impact the University of Arizona’s Graduate College by giving administrators and instructors substantial knowledge about what motivates their online
students within the Outreach College. The research will also impact the lives of students by improving their classes, educational success and overall college experience.

Implications
The research will give a breakdown of student characteristics based on motivation level. Additionally, this study will give the Outreach College a clear picture on improvement needs of online distance learning courses. If online courses are catered to student’s needs, based on the Self-Determination Theory then, in turn, students will acquire an Intrinsic motivational level which has a higher rate of course completion. The University can use this research to lower their attrition rates within the online learning courses in the Outreach College. The findings of the current study will aid instructors in online class preparation in order to successfully teach online course and obtain the lowest attrition rate possible.

Definition of Terms
These specific terms may be used multiple times throughout the study. These terms are defined as they apply directly to the study:

Amotivation- Is the state at which a student lacks motivation to engage in a class or activity. Usually indicated by a lack of perceived competence and/or failure to value the task or its outcomes. See Self-Determination Theory

A synchronous distance learning environments- Is a learning environment that in which online students are not required to partake in learning at the same time that instruction is given. Requires no specific set time of the day to complete course work or communications.
**Distance learning**- Is learning that does not require conventional classroom instruction at school or face-to-face. Agricultural Extension Programs are widely known for this instruction. Workshops, demonstrations and online learning are all possible modes for distance learning.

**External regulation** - Is the level of extrinsic motivation most often contrasted with intrinsic motivation. Individuals in this level of motivation are usually driven and compliant by threats of punishment or the offer of rewards (Hartnett, 2011).

**Identified regulation** - Is associated with individuals who engage in an activity because the results may have personal value to them or because the activity is regarded as worthwhile. Internal motivation comes from within the individual because they have chosen the goal or identified it and is as important. But this motivational pattern is also still considered extrinsic, in the sense that it is the utility value (a means to an end), personal importance, and/or relevance of the task rather than interest and enjoyment in the task itself that determines the behavior (Brophy, 2008; Brophy, 2010; Hartnett, 2011).

**Intrinsic motivation**- Is the level of motivation in which students do not need outside incentives as a reward for completing a task. Students complete the task just for the sake of wanting to complete it. The task is integrated into their sense of self and, therefore, motivation comes from their own will and desire (Hartnett, 2011).

**Integration**- “Is the final and most autonomous type of extrinsic motivation, where learners engage in the activity because of its significance to their sense of self” (Hartnett, 2011, p 33).
**Introjection** - “Refers to students who engage in a task because they feel they should due to the expectations of others” (Hartnett, 2011, p. 33).

**Online learning** - Is a learning environment in which students are able to partake in classes via web and/or computer technology.

**Synchronous distance learning environments** - Is a learning environment that in which online students are required to partake in learning at the same time that instruction is given. Requires a specific set time of the day to complete communications and/or assignments.

**Limitations of the Study**

The findings of this study were limited to online graduate learners at the University of Arizona in the Outreach College. Therefore, results may not be generalized beyond the responding sample. As with any study, the results are affected by threats to internal and external validity. “Campbell and Stanley (1979) elaborated on this previous classification to four types of validity: internal validity, external validity, construct validity, and statistical conclusion validity” (Ary, Jacobs, & Sorensen, 2010, p. 271).

External Validity refers to the generalizability of the observed variables’ relationship while internal validity begs the question of the relationship itself (Fraenkel & Wallen, 2006). “Construct validity deals with psychological constructs such as intelligence, motivation, learning, personality, self-concept, creativity, attitudes and anxiety” (Ary, Jacobs, & Sorensen, 2010, p. 290). Abstract constructs, like motivation, cannot be measured directly and are made up of indicator questions. Construct validity measures a psychological construct by focusing on test scores if the indicator questions. In this research, each level of motivation is a separate construct. Motivation is a construct in
which characteristics or hypothetical qualities are composed in order to interpret an observable behavior.

Statistical conclusion validity

The following factors may have an influence or threat to validity in this research:

1. The results of this study only apply to persons partaking in this study.

2. Measurement error is possible in this study. In order to limit this error, a panel of experts consisting of Dr. Edward Franklin, Dr. Matthew Mars, Dr. Robert Torres and Dr. Ryan Foor reviewed the instrument for content and face validity.

3. Construct validity may be a concern due to the attitude scale used to place individuals along a continuum of motivation. The summated or Likert-scale used was altered from a previously designed attitude scale (Situational Intrinsic Motivational Scale). Threats to validity are taken into account because of the construct’s abstract nature. There are always concerns to what extent the Likert scale truly measures the participant’s attitude of the selected construct. (Ary, Jacobs, & Sorensen, 2010).

Another limitation of this study is the time at which data was collected. Part of the population had completed online classes in the Fall Semester previous to when the research was carried out. If research was carried out using only spring students it may have yielded different results.

Basic Assumptions

A major assumption of this study was that the online learners had significant experience with their online class(es) to successfully evaluate their perceptions of the class(es). The second assumption is that all participants answered the questions truthfully
and accurately. A third assumption is all participants are cognitively capable of answering questions.
Chapter II

Historical Background

From 1920 to 1960, an increasing number of psychologists were predominantly focused on researching the teaching method called behaviorism. Psychologists have extensively studied highly controlled, directly observable behaviors for many years. Behaviorists focused on; the subject’s environment (antecedent condition), subjects exhibited behavior and what consequence follows (Martin, 2012). For example, psychologists often studied these two popular observable behaviors: classical conditioning and operant conditioning (Schunk, 2011). Pavlov’s dogs are an example of observable behavior; behavior can be trained and, therefore, motivation is trained. With stimulus response relationships, it is possible to induce motivation by reward or punishment. Educational psychologists began to see these observable behaviors lacked explanatory power (Young, 1995). Knowledge, beliefs and self-perspective were not explained to students, but forced; therefore, a need for relatedness and social interactions arose and the constructivism movement was introduced in the 1940s. The shift from behaviorism to constructivism research was a huge paradigm shift; researchers would have to study non-observable behavior and infer their research to be correct. Researchers began to focus on cognition, brain based learning, learning style, motivation, learning environments, beliefs, and attitudes (Schunk, 2011). With Constructivism, no longer was the success of student learning the sole responsibility of the teacher, but also brain based consequences.

Schunk (2011) stated that four major psychologists, Piaget, Vigotski, Rodgers, and Maslow headed this movement. Psychologists also studied another faucet that arose
shortly after constructivism called humanism. Humanism means that people strive for a level of self-actualization. In addition, people are motivated to have their basic needs met before learning can take place. Koltko-Rivera believes if an individual’s needs are met, they can rise to self-actualization and self-discovery (1998). These are imperative components to successful learning.

Rotter and Weiner studied Locus of Control, a popular theory within Humanism. These researchers found that people are motivated if they have control of themselves and their lives. If a person believes they are successful because they put effort in their tasks, they will be successful and can move forward (Bernard, 2010). If a person believes they are incompetent and cannot complete a task, they become amotivated.

Theoretical Framework

Basic Psychological Needs
Of the various studies performed in the realm of student motivation, none are as influential as the Self-Determination Theory (SDT) or goes into such great extents to clarify aspects of motivation (Deci & Ryan, 1985). SDT is built on the fundamental premise of learner autonomy. All people have an intrinsic want to deem themselves self-determining (autonomous), competent, and associated in relation to their environment. If the conditions are correct for the individual, then intrinsic motivation will occur and if not, then extrinsic motivation may occur (Deci & Ryan, 2000).

According to the classification, Amotivated individuals lack intention to act (motivation). The absence of basic needs could be related to their feeling of incompetence or low self-efficacy (Bandura, 1997, 1977). In early research, intrinsic and extrinsic motivations have often been considered to be in opposition within the continuum of the Self-Determination Theory. Four subcategories of extrinsic motivation
are identified within this continuum: external regulation, introjection, identified regulation, and integration. They are derived from Deci’s original model that states:

From lower to higher levels of self-determination, these are external and identified regulations. External regulations occur when behavior is regulated by rewards or in order to avoid negative consequences. That is, regardless of whether the goal of behavior is to obtain rewards or to avoid sanctions, the individual experiences an obligation to behave in a specific way. In contrast, identified regulation occurs when a behavior is valued and perceived as being chosen by oneself. Yet, the motivation is still extrinsic because the activity is not performed for itself but as a means to an end. Besides intrinsic and extrinsic motivation, Deci and Ryan (1985) have proposed a third motivational concept namely, amotivation, to fully understand human behavior. When amotivated, individuals experience a lack of contingency between their behaviors and outcomes. Their behaviors are neither intrinsically nor extrinsically motivated. Amotivated behaviors are the least self-determined because there is no sense of purpose and no expectations of reward or possibility of changing the course of events. Amotivation can thus be seen as similar to learned helplessness (Abramson, Seligman, & Teasdale, 1978)(Guay, 200 p. 177).

Quality of behavior must be paired with the feeling of competence, relatedness and autonomy of the original (SDT) model to have intrinsic motivation. The researcher must assess both intrinsic and extrinsic motivation in a multi-dimensional fashion at the situational level in order to achieve the goals. For the purpose of this research, only the four most basic levels of motivation are used as constructs.

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<th>Quality of Behavior</th>
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<td>Intrinsic Motivation</td>
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<td>Non-self-Determined</td>
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Figure 1. Elements of the SDT model of motivation used to measure motivation in this study.
Theoretical Foundation

Organismic Integration Theory
Deci and Ryan have developed five mini or sub theories since the creation of the Self-Determination Theory. They believe the Self-Determination Theory is made up of these five sub theories. One of these sub theories is the Organismic Integration Theory (OIT), which states the process in which people go through when changing from being extrinsically to intrinsically motivated (Ciani, 2011). The process or transition starts with the individual being extrinsically motivated. For example, there is a greenhouse at a high school and one student is elected to test the pH of the soil every week. At first, the student is extrinsically motivated because they are only completing the task for a grade or to avoid punishment if the plants die. They may not necessarily want this task simply for the sake of testing the pH in the soil. Over time, the behavior becomes interjected; it becomes a part of the student. The student begins to identify with the task and feels shame or guilt when they do not test the pH. Testing the pH daily is now the student’s felt role, becoming integrated into their personality and a part of their sense of self. Ultimately, this process causes the student to become intrinsically motivated, take ownership in his/her role, and begin to enjoy the task at hand ("Self-Determination Theory," 2013). Like all theories, there are arguments that the transition from being extrinsically to intrinsically motivated does not always occur. Overall, the argument is that humans are able to move from being extrinsically motivated to intrinsically motivated over time if all needs are met. This transition is representative of development and moves along a continuum. (See Figure 1)

Another argument to the original SDT is that the theory is uni-dimensional. Vallarand (2001) states that there are three levels to this theory; He argues that there is a
global, contextual, and situational level (Guay, 2000). Vallarand believes individuals have the perceptions and needs of autonomy, competence and relatedness, but they exist on a global, contextual, and situational level. For example, if a student believes they are a competent person (global), and they are competent in math (contextual), then in turn, they will most likely feel they could solve a long division problem (situational). If an individual thinks about these needs in a top down fashion, this could be a possible scenario: if the individual feels competent (global) then they approach the mathematics as feeling competent (contextual) and will approach the situation of a long division situation feeling competent ("-determination theory," 2013). More importantly, this theory can be looked at from the bottom up. If there are many situations where a student attempts long division and fails (situational), they will not see themselves as competent at long division (contextual), then they start to feel as they are not competent in math (global) that may affect his/her overall global sense of-. 

In the original Deci and Ryan model, autonomy, competence, and relatedness exist on three different levels. In this regard, teachers and researchers can begin to think about how students’ needs can affect the outcome of specific goals (Vallarand, 2001). The more these needs are met, the more intrinsically motivated and self-regulated a student becomes. In turn, there is a feedback loop where motivation becomes self-recursive and students are more likely to be successful in reaching their end goals.

*Causality Orientations Theory*

Deci and Ryan’s Causality Orientations Theory (COT) addresses individual differences in people’s tendencies to orient towards environments, and how individuals regulate environment in different ways (1985). According to this theory, there are three
causality orientations: *autonomy orientation, control orientation* and *impersonal orientation*. COT is the extent to which individuals seek to be autonomous, controlled or in regulation of their behavior. When autonomy orientated individuals seek opportunities to be self-determining, it is a result from satisfaction of all basic needs. Controlled orientations focus on rewards, gains and approvals and is a result from relatedness and satisfaction by the individual. Individuals rely on internal and external rewards to regulate behavior. Impersonal orientations results from the lack of all three basic needs (autonomy, relatedness and competence) resulting in anxiety of competence and feelings of helplessness (Deci, Ryan, Williams, Guardia, Lynch, Hoefen & Niemiec).

*Goal Contents Theory*

Goal contents theory is based on two types of goals; Mastery that is focused on the task and learning, and also Performance goals that are focused on ability to perform or compete, usually based on ego and a desired outcome. Mastery goals are associated with intrinsic motivation while Performance goals are linked to external motivation. These are also known as approach or achievement type goals. Avoidance goals consist of an individual’s need to avoid a task or punishment. “Goals are seen differently affording basic need satisfactions and are thus differentially associated with well-being”(Deci, Ryan, Williams, Guardia, Lynch, Hoefen, & Niemiec, (n.d.)). Mastery or intrinsic goals like relationships and personal growth are associated with higher wellness and well-being while, Performance or extrinsic goals are linked to ill being and lower wellness.

*Cognitive Evaluation Theory*

Many current theories of motivation focus the individual’s outcome based on their personality and opinion of their goals. Psychologist Albert Bandura’s Social Cognitive
Theory (1977) deals with an individual’s self-efficacy. Bandura’s theory emphasizes there are many different components that make up an individual’s personality. Personality consists of social experience, observational learning, and reciprocal determination (Bandura, 1977). Bandura suggested that a person’s attitudes, abilities, and cognitive skills makeup the self-system. The self-system is a factor in how an individual perceives a situation and how the individual behaves in response to different situations. In the self-system, efficacy plays a role. Self-efficacy is "the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2).

Cognitive evaluation theory is the way a person thinks about how they are rewarded or how they value a behavior, responsibility, or internal achievement (Martin, 2012). The cognitive evaluation theory (CET) was presented to specify the factors in social contexts that produce variability in intrinsic motivation. CET, which is considered a sub theory of the Self-Determination Theory, argues that interpersonal events and structures (e.g., rewards, communications, feedback) that conduce toward feelings of competence during action can enhance intrinsic motivation for the task because; they allow satisfaction of the basic psychological need for competence. “Accordingly, optimal challenges, effectance promoting feedback, and freedom from demeaning evaluations are all predicted to facilitate intrinsic motivation” (Deci, 2000 p. 58). CET also proclaims the feeling of competency does not enhance intrinsic motivation unless it is accompanied by autonomy and competence (self-efficacy) if self-determined internal motivation is to occur (Martin 2012).
A person’s belief in their ability to succeed in any situation is crucial to their motivation. Self-efficacy is a determinant on how people behave, think, and feel. Efficacy can have a large impact on psychological states to motivation. People have set goals and desired achievements. Individuals strive for these goals and make necessary changes to achieve them. Self-efficacy is a large factor in how these goals are approached. The Cognitive Evaluation theory is one of five sub theories of the Self-Determination Theory.

_Self-Determination Theory_

The five sub theories of The Self-Determination theory are concerned with outcomes and direction of behavior but do not deal with why individuals desire these outcomes. The Self-Determination Theory addresses this need and pathway for the desired outcome (1985).

The Self-Determination Theory is a vastly studied theory in educational psychology. Edward Deci and Richard Ryan coined the SDT theory, which addresses motivation, outcomes, and the energy that drives these outcomes or goals (1985). Researchers state
that, “SDT is a meta-theory that examines motivation, or the energy, cognition, and behavior required to meet individual needs” (Johnson, Stewart & Bachman, 2013 p.).

There are two main motivation orientations: intrinsic and extrinsic. Intrinsic motivation is a driver that is dependent upon an inherent benefit of the individual. Humans who are intrinsically motivated are more likely to enjoy completing a task simply for the sake of completing it. External forces, on the other hand, drive extrinsic motivation. Tasks that involve extrinsic motivation are more controlling and people do not necessarily feel competent or connected to others while completing them. Individuals are only motivated to pursue rewards or avoid punishment (Deci, 2000). Deci and Ryan argued that three psychological needs must be met in order for a person to be intrinsically motivated. These needs are autonomy, competence, and relatedness (Deci & Ryan, 1985). See figure 3 below (Deci & Ryan, 2000).

*Conceptual Framework*

Three Innate Psychological Needs Comprise The Self-Determination Theory of Student Motivation

![Self-Determination Motive Diagram](image)

*Figure 3: Self-Determination Motive*

All people have a requirement for these needs to be met in order to be motivated no matter their culture, race or heritage. Autonomy is the feeling someone has when they
are capable of doing things on their own. Individuals need to feel competent in themselves and that they are able to be a capable human being. People must also feel a sense of belonging or relatedness to a group of people.

**Summary**

The need for autonomy, relatedness and competence are interrelated. Deci and Ryan believe that where all three needs are met, that humans are more intrinsically motivated (1985). People who are more intrinsically motivated are more likely to be self-regulated. Extrinsic motivated people are less self-regulated. Self-regulation is dependent upon a person’s capability to plan and act on a particular pursuit or goal (2000, commentaries). A self-regulated person can see the goal at the end of the tunnel, plan steps to achieve the goal, monitor the actions along the way and adjust, as needed, to complete the goal. Self-regulation leads to better outcomes. Deci and Ryan argued that all humans are fundamentally intrinsically motivated and only become extrinsically motivated when all three main needs are forted (2000). A school environment may be considered to be an environment where all three psychological needs are not met; consider behavioral teaching.
CHAPTER III

Purpose and Research Objectives

The purpose of this study was to describe the level motivation among students in an online learning environment.

Research Objectives
1. Describe students on selected (age sex, year in school, ethnicity, education, employment status, internet access and use) demographic characteristics.
2. Describe synchronous and asynchronous distance learning environments.
3. Describe the type (intrinsic, identified regulation, external regulation or amotivation) of motivation students possess while participating in an online learning environment.
4. Describe the type of motivation by selected student demographic characteristics (sex, race, marital stats, and highest educational level).

Research Design
This research is a descriptive study of the drivers of student motivation.

Descriptive research is also known as survey research because its use of instruments such as questionnaires and interviews to gain information from participants. Questionnaires allow the researcher to summarize a group of participant’s characteristics or to measure attitude or opinions of a construct or topic. Educational and social science researchers often use descriptive research to gain insight. This research is basic research and its goal is to obtain data in order to further expand the Self-Determination Theory as well as the motivation continuum without regard to practical application.

Student motivation is imperative for student success and retention in online college programs. The method for conducting this research was by survey. In order to describe
the type of motivation of graduate online learners at the University of Arizona, summated rating scales were used to collect data using Qualtrics. Qualtrics is an online survey tool used by the University of Arizona to conduct research. Learning environment information was collected to depict the setting of the online learners. Characteristic data was also collected in order to determine if there was any relationship between selected characteristics and level of motivation.

Population and Subject Selection

The subjects of the study were attained by a list of all graduate outreach college students partaking in online classes through the University of Arizona provided by Dr. Matthew Mars, Associate Dean of the Outreach College. The population may range in age, gender, culture, employment status, and need for content mastery.

The target population was all the University Of Arizona online graduate Outreach College students enrolled in online classes in the Fall 2013 and Spring 2014 semesters. The frame of the target population was at the researcher’s disposal through Dr. Mars. A census was taken from the target population of 943 students using identification numbers provided through Qualtrics.

The students represented in the current study were enrolled in online courses through the Outreach College. The Outreach College has since been discontinued and distance education has been centralized under the Office of the Senior Vice President for Student Affairs and Enrollment Management and Vice Provost for Academic Initiatives and Student Success. Accordingly, all recommendations proposed through the current study are directed at this current distance education organizational unit.
Instrumentation

The Situational Motivation Scale (SIMS) has been developed to access both intrinsic and extrinsic motivation in a multidimensional fashion at the situational level. SIMS is reflected in part one of the questionnaire (Appendix A). This scale measures four types of motivation: intrinsic motivation, identified regulation, external regulation, and amotivation. There are three types of extrinsic motivation: Apprehension with performance, pressure and tension, and distress with the experimenter’s judgment (Conti, 1995). Conversely, Conti states, these subscales of external motivation and intrinsic motivation have not been copiously validated and have minimal levels of internal consistency based on the Intrinsic Motivational Inventory, a self–report instrument designed to evaluate the underlying dimensions of intrinsic and extrinsic motivation (1995). The authors themselves concluded: “Because of the limited reliability of several of these scales, results of analyses on these variables must be interpreted with caution” (Conti, 1995, p. 1112). Therefore, for the purpose of this research only one construct of external motivation and internal motivation was measured.

Although traditional scales for measure in situational motivation like the Intrinsic Motivation Inventory (IMI; McAuley, Duncan, & Tammen, 1989), and The Mayo Task Reaction Questionnaire (TRQ; Mayo, 1977) provide results in line with modern motivational theories, none of them assess the types of extrinsic motivation proposed by Deci and Ryan and also include an amotivation construct (1985). The Free-choice measure is difficult to use in field studies, “This measure is designed to assess a more diverse range of the types of motivation postulated by Self-Determination Theory, namely intrinsic motivation, identified regulation, external regulation, and amotivation”
The instrument would also propose answers to questions of other types of regulation than intrinsic motivation (2000).

A three part, 27 total item researcher developed questionnaire was used in this study. The Instrument’s parts were designed to obtain participant characteristics, determine a self-report motivation scale, and selected learning environment questions designed to explore potential relationships to evaluate a contextual motivational orientation toward educational activities. The first part of the instrument determined the motivation level of students participating in online learning programs. The items were created from Vallerand’s Situational Measures Scale (1989). Four constructs in conjunction with four indicator questions, totaling 16 questions, were asked of participants to determine level of motivation. Participants were requested to report a level of agreement for each item using a seven-point Likert scale (1932) also known as a summated attitude rating scale. (1=Corresponds not at all, 2=Corresponds very little, 3=Corresponds little, 4=Corresponds moderately, 5=Corresponds enough, 6=Corresponds a lot, 7=Corresponds exactly.) The Likert Scale was developed by Rensis Likert to assess attitudes towards a construct. The scale lists a set of statements and requires participants to select a level of agreement for each item; every level is assigned a numeric value and, “the sum of the weights of all the items checked by the subject is the individual’s total score. The highest possible scale score is 7 \* N (the number of items); the lowest possible score is 1 \* N” (Ary, Jacobs, & Sorensen, 2010, p. 210). Statements are randomized to prevent participants from associating indicators with constructs.

Part two of the Instrument described the online learning environment. There were two types of learning environments, synchronous and asynchronous; each with listed
subcategories. Participants were asked to check all learning environments that applied to their online courses. The third section of the Instrument was designed to collect Characteristic information of the participants. Specifically, the instrument obtain participants’ sex, age, race, origin, marital status, education, Internet use, computer use, and Internet use.

**Instrument Validity**
Evidence of construct validity of the SIMS scale if offered by a simplex-pattern of correlations among the four subscales. The SIMS scale is based on the -Determination Theory continuum; “more precisely, the interrelations among subscales were expected to form an ordered pattern in which those subscales adjacent along the self-determination continuum were expected to correlate more positively than those more distant along the continuum” (Guay, 2000 p. 181). In addition to construct validity, content validity is a concern. A panel of experts consisting of, Dr. Edward Franklin, Dr. Matthew Mars, Dr. Robert Torres and Dr. Ryan Foor reviewed the instrument or content and face validity. All experts used have conducted extensive research in the Department of Agricultural Education at the University of Arizona. The panel reviewed the draft of the pilot instrument in December of 2013. After review, minor revisions were made and the pilot test was deemed ready for administration.

**Instrument Reliability**
Reliability is related to the extent at which the measure would yield consistent results. A pilot study determined the reliability of the questionnaire. Part one of the instrument is the attitudinal scale (SIMS); the researcher sought to find the reliability of each construct of the motivational scale. First, it is essential to determine if the attitudinal or Likert scale is long enough. The attitudinal scale must include enough items to provide a sample that
is representative of the whole domain of opinions for each construct. Ary, Jacobs & Sorenson argue the length of the attitudinal scale for each construct is directly related to the size of the reliability coefficient. The explicitness of the construct depicts the proper number of indicator items needed (2010). For example, extremely abstract constructs need many indicators to solidify that the questionnaire could determine participant’s attitudes of the construct. The most widely used index to measure an attitude scale is the coefficient alpha, known as Cronbach’s alpha developed by Lee Cronbach in 1951. Cronbach’s alpha, “provides a measure of the extent to which all the items are positively intercorrelated and working together to measure one trait or characteristic (the attitude)” (Ary, Jacobs, & Sorensen, 2010, p. 212). The researcher’s instrument was composed of an attitude scale and had a range of seven values using a Likert-scale; discussed under Instrumentation. Many computer programs may be used to provide a Cronbach’s alpha. The researcher uses Social Sciences (SPSS) version 22 to complete the index of reliability for each of the four constructs of motivation.

The pilot study was designed and administered to the population in January of 2014. The pilot population was chosen from online undergraduate students in the Outreach College form spring of 2014 (n=11). The instrument was developed based on the literature review, and the SIMS scale utilized by Guy, Vallarand and Blanchard (1989). The pilot was administered through Qualtrics, January 22, 2014. All 11(100%) individuals in the pilot-study population responded with 11 (100%) being complete and usable.
Instrument reliability also determines the internal Consistency of an item by determining Chronbach’s alpha (Ary, Jacobs, & Sorensen, 2010). The pilot study was used to determine the reliability of each level of the motivational scale or construct.

**Analysis of Pilot Study**

Data collected from the pilot study were analyzed to determine the reliability using Statistical Package for the Social Sciences (SPSS) version 22. The minimum alpha level of .70 was established *a priori* to determine reliability for each construct. The Cronbach’s alpha coefficient of .96 was calculated for Intrinsic Motivation comprised of four indicator questions. Identified regulation reported a Cronbach’s alpha coefficient of .89; External Regulation reported a Cronbach’s alpha coefficient of .61 and Amotivation reported a Cronbach’s alpha coefficient of .88. It is important to note that External Regulation reported a Cronbach’s alpha lower than .70 and that reliability may be threatened due to measurement or other sources or error.

Other possibilities for risk to reliability coefficients include lack of heterogeneously of the group, length of the questionnaire, and the nature of the variable or construct. The pilot study was administered to only online undergraduate students in the Outreach College enrolled in fall of 2013. If the population were all online students at The University of Arizona Fall of 2013 and Spring 2014, then the heterogeneity of the group would have an increased spread and the reliability coefficient would have increased. The researcher attempted to correct this in the actual study by targeting students in the Fall 2013 and Spring 2014 semesters of school verses one single semester.

Also, if each construct had more indicator questions then the reliability would increase due to a more representative outcome; it would be closer to the individual’s true
score. Unfortunately, no action was taken to increase the amount of indicator questions based on lack of felt expertise and mastery of the researcher; also, there was a felt need to stay as true to the SIMS questionnaire as possible.

Lastly, the nature of the variables or constructs in this research are abstract. In research, there are variables that portray a very consistent measure while others may be often inconsistent. Motivation is an abstract construct to measure and, therefore, is difficult to consistently measure.

Data Collection
According to Dillman (2009), five points of contact are crucial for amplifying response rate. In this study, only four points of contact were used. Four waves of notifications were sent out to the entire population of online Graduate Outreach Students. Each point of contact directed the population to respond to the questionnaire electronically on www.qualtrics.com. Qualtrics is an online survey tool used to aid in research. The system allows the researcher to input participant frames, download letters to be distributed, create questionnaires, email participants, pre assign dates for mailing and store participant responses. Upon input into a Qualtrics frame, participants were assigned unique codes to track responders, non-responders and allow for anonymity.

The first point of contact was an email sent out to inform the participants of the research objectives and the incentive of an iTunes gift card raffle (see Appendix D). One day later, an email is distributed reminding participants of the purpose and objectives of the study; the message also contained a link to the questionnaire (see Appendix E). One day later, a second reminder email was sent to the participants with the questionnaire link (see Appendix F). The fourth wave was three days later, reminding them of the
questionnaire’s end date (see Appendix G). This letter was similar to the reminder letters but included an appreciation for participants who responded, and included the cut off date for responses. Data collection ceased on April 14, 2014 at 5 pm. The data collection timeline is found in Table 1.

Table 1.

*Timeline and Points of Contact in the Data Collection Process*

<table>
<thead>
<tr>
<th>Date</th>
<th>Contact Type</th>
<th>Appendix</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 9, 2014</td>
<td>Advanced notice email</td>
<td>D</td>
</tr>
<tr>
<td>April 10, 2014</td>
<td>Mail purpose letter with questionnaire</td>
<td>E</td>
</tr>
<tr>
<td>April 11, 2014</td>
<td>Send questionnaire reminder</td>
<td>F</td>
</tr>
<tr>
<td>April 14, 2014</td>
<td>Final Reminder</td>
<td>G</td>
</tr>
</tbody>
</table>

At the completion of data collection, 178 individuals responded yielding an 18% response rate that was deemed by the researcher usable and complete.

_Data Analysis_

Data were analyzed using descriptive statistics. An item analysis was carried out using Statistical Package for the Social Sciences (SPSS) 22.0. Subjects whose questionnaires were incomplete were excluded automatically by SPSS.
Chapter IV

Results

Purpose and Research Objectives

The purpose of this study was to describe the level motivation among students in an online learning environment.

Research Objectives
1. Describe students on selected (age sex, year in school, ethnicity, education, employment status, internet access and use) demographic characteristics.
2. Describe synchronous and asynchronous distance learning environments.
3. Describe the type (intrinsic, identified regulation, external regulation or amotivation) of motivation students possess while participating in an online learning environment.
4. Describe the type of motivation by selected student demographic characteristics (sex, race, martial stats, and highest educational level).

Research Objective One
Research objective one sought to determine the online Outreach College graduate students’ characteristics (Table 2). Out of the respondents (n = 178), females represented 66.9% of the population and males 30.9% of the population. The population was mainly Caucasian, approximately eighty percent of respondents reported being of Caucasian descent, whereas the remaining ethnicities included African American (6.2%), American Indian (2.8%), Asian Indian (2.2%), Chinese (2.2%), Filipino (0.6%), Asian .6%, Japanese (0.6%), and Korean (0.6%). There were no respondents representing Vietnamese, Hawaiian, Guamanian, Samoan or Pacific Islander descent. The category in
which thirteen people identified with was Other; 7.3% fall into this category. These individuals feel like they do not fit in any of the given race categories.

Marital status depicted showing that of online graduate learners, 57.9% are married, 11.2% divorced and 26.4% have never been married. Regarding the highest degree earned, the largest percent of online learners reported having a Bachelor’s degree (48.3%). Students with one or more years of college are a low percentage, 2.8% and Associate Degree completers were 9.0% of the population. It is unusual that there were any frequencies in these two categories because the population was intended to be graduate students. Students with a Master’s Degree also were high in percentage at 32%. Percentages of students with degrees higher than a master’s were small; Professional degrees were 3.4% and Doctorate Degrees were 2.2% (Table 2).
### Characteristics of Online Learning Graduate Students (n=178) *

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>119</td>
<td>66.9</td>
</tr>
<tr>
<td>Male</td>
<td>55</td>
<td>30.9</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>143</td>
<td>80.3</td>
</tr>
<tr>
<td>Black, African Am., or Negro</td>
<td>11</td>
<td>6.2</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>5</td>
<td>2.8</td>
</tr>
<tr>
<td>Asian Indian</td>
<td>4</td>
<td>2.2</td>
</tr>
<tr>
<td>Chinese</td>
<td>4</td>
<td>2.2</td>
</tr>
<tr>
<td>Filipino</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Other Asian</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Japanese</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Korean</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Guamanian or Chamorro</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Samoan</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>7.3</td>
</tr>
</tbody>
</table>
Continued Table 2

<table>
<thead>
<tr>
<th>Origin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not of Hispanic, Latino or Spanish origin</td>
<td>86.0</td>
</tr>
<tr>
<td>Hispanic, Mexican, Mexican Am., Chicano</td>
<td>8.4</td>
</tr>
<tr>
<td>Hispanic, Puerto Rican</td>
<td>1.1</td>
</tr>
<tr>
<td>Other Hispanic, Latino or Spanish</td>
<td>1.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital Status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Now Married</td>
<td>57.9</td>
</tr>
<tr>
<td>Widowed</td>
<td>0.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>11.2</td>
</tr>
<tr>
<td>Separated</td>
<td>1.1</td>
</tr>
<tr>
<td>Never Married</td>
<td>26.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or more years of college, no degree</td>
<td>2.8</td>
</tr>
<tr>
<td>Associate degree</td>
<td>9.0</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>48.3</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>32.0</td>
</tr>
<tr>
<td>Professional Degree</td>
<td>3.4</td>
</tr>
<tr>
<td>Doctorate Degree</td>
<td>2.2</td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.

Research Objective Two

Research objective two sought to determine online learning environments experienced by graduate students. The online environment categories were asynchronous and synchronous with options under each to select. The participants were asked to check all that apply. The options were as follows: Synchronous – Chat (text only), Video conferencing, Web conferencing, Internet radio/podcasts, Voice, Virtual worlds; Asynchronous – Video, E-mail, Discussion boards, Social networking, Wikis and/or collaborative documents, e-Portfolios and DVD/CD-ROM.
The majority of the students reported their online class(es) being Discussion boards ($n=154$). E-mail was also a common environment ($n=152$). The only other online environment with a frequency over 100 was Video. Voice and DVD/CD-ROM were the lowest frequencies under 50. (Table 3)
Table 3  
*An Overview Types of Distance Learning Environments (n = 178)*

<table>
<thead>
<tr>
<th>Learning Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion boards</td>
<td>154</td>
</tr>
<tr>
<td>E-mail</td>
<td>152</td>
</tr>
<tr>
<td>Video</td>
<td>134</td>
</tr>
<tr>
<td>Chat-text only</td>
<td>72</td>
</tr>
<tr>
<td>Video Conferencing</td>
<td>70</td>
</tr>
<tr>
<td>Web Conferencing</td>
<td>69</td>
</tr>
<tr>
<td>Internet radio/podcasts</td>
<td>59</td>
</tr>
<tr>
<td>Wikis and/or collaborative document</td>
<td>53</td>
</tr>
<tr>
<td>Social Networking</td>
<td>49</td>
</tr>
<tr>
<td>Voice (telephone or voice-over IP)</td>
<td>45</td>
</tr>
<tr>
<td>e-Portfolios</td>
<td>40</td>
</tr>
<tr>
<td>DVD/CD-ROM</td>
<td>17</td>
</tr>
<tr>
<td>Virtual Worlds</td>
<td>15</td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.*
Research Objective Three

This objective sought to determine the level of motivation of online graduate students in the Outreach College. Frequency and percent were reported for each of the seven points on the Likert-type scale. The seven points of the scale are; 1=“corresponds not at all”, 2=“corresponds very little”, 3=“corresponds little”, 4=“corresponds moderately”, 5=“corresponds enough”, 6=“corresponds a lot”, and 7= “corresponds exactly”. Each construct on the motivational scale is made up of four of the 16 question items. The constructs are made up of the motivational scale; Intrinsic Motivation, Identified Regulation, External Regulation and Amotivation. Constructs made of these questions are shown below and data tables are separated by construct.

Table 4 shows an overview of the first construct, Intrinsic Motivation. This table displays the summative mean arranged from highest to lowest with the standard deviation for each question item associated with the construct of intrinsic motivation. Table 5 shows the frequency and percent for each of the question items related to intrinsic motivation. The majority of the frequencies respond with “Corresponds Moderately.” The second construct is Identified Regulation. The mean for the question items are listed in Table 6. The highest mean reflects the response, “by personal decision.” The breakdown of response frequency for this constraint can be found in Table 7. The summated mean for this construct is 1.49. The third construct is External Regulation seen in Table 8. The highest mean question items for External regulation was, “Because I feel that I have to participate in online learning” ($M=3.93$) with the item, “Because I don’t have any other choice close after” ($M=3.87$). Table 9 contains the frequency and percent breakdown for each question item.
The last construct measured in the attitude scale is Amotivation. Table 9 depicts the mean and standard deviation for each question item pertaining to this construct. The indicator question, “I participate in online learning, but I am not sure if it is worth it,” had the highest mean with a score of 2.38. The next highest mean was the indicator question, “I participate in online learning, but I am not sure it is a good thing to continue it,” with a mean of 2.36. The indicator question, “There may be good reasons to do this online learning, but personally I don’t see any,” had a mean of 2.12 and the indicator, “I don’t know; I don’t see what online learning does for me,” was the lowest with a mean of 1.85. Table 9 shows a breakdown of each question’s frequency and responses for Amotivation.

Table 4
An Overview Intrinsic Motivation (n=178)

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean^a</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because I think that online learning is pleasant.</td>
<td>3.70</td>
<td>1.68</td>
</tr>
<tr>
<td>Because I feel good when participating in online learning.</td>
<td>3.54</td>
<td>1.87</td>
</tr>
<tr>
<td>Because I think that online learning is interesting.</td>
<td>3.48</td>
<td>1.83</td>
</tr>
<tr>
<td>Because online learning is fun.</td>
<td>3.14</td>
<td>1.75</td>
</tr>
<tr>
<td>Summated Value</td>
<td>3.46</td>
<td>1.58</td>
</tr>
</tbody>
</table>

*aBased upon: 1= Corresponds not at all, 2= Corresponds very little, 3= Corresponds little, 4= Corresponds moderately 5= Corresponds enough, 6= Corresponds a lot, 7= Corresponds Exactly

*Total not yielding 178 due to missing data.
<table>
<thead>
<tr>
<th>Item</th>
<th>Corresponds not at all</th>
<th>Corresponds very little</th>
<th>Corresponds little</th>
<th>Corresponds moderately</th>
<th>Corresponds enough</th>
<th>Corresponds a lot</th>
<th>Corresponds exactly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because I think that online learning is pleasant.</td>
<td>21 11.8</td>
<td>25 14.0</td>
<td>34 19.1</td>
<td>39 21.9</td>
<td>27 15.2</td>
<td>22 12.4</td>
<td>8 4.5</td>
</tr>
<tr>
<td>Because I feel good when participating in online learning.</td>
<td>38 21.3</td>
<td>21 11.8</td>
<td>25 14.0</td>
<td>36 20.2</td>
<td>20 11.2</td>
<td>28 15.7</td>
<td>8 4.5</td>
</tr>
<tr>
<td>Because I think that online learning is interesting</td>
<td>36 20.2</td>
<td>24 13.5</td>
<td>27 15.2</td>
<td>36 20.2</td>
<td>25 14.0</td>
<td>18 10.1</td>
<td>0 0.5</td>
</tr>
<tr>
<td>Because online learning is fun</td>
<td>44 24.7</td>
<td>28 15.7</td>
<td>31 17.4</td>
<td>32 18.0</td>
<td>20 11.2</td>
<td>16 9.0</td>
<td>5 2.8</td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.
Table 6
An Overview of Identified Regulation (n = 178)

<table>
<thead>
<tr>
<th>Why did you recently engage in online learning?</th>
<th>Mean(^a)</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>By personal decision</td>
<td>5.02</td>
<td>1.96</td>
</tr>
<tr>
<td>Because I am doing it for my own good</td>
<td>4.99</td>
<td>1.852</td>
</tr>
<tr>
<td>Because I think that online learning serves me best</td>
<td>4.54</td>
<td>1.997</td>
</tr>
<tr>
<td>Because I believe online learning is important for me</td>
<td>3.99</td>
<td>2.02</td>
</tr>
<tr>
<td>Summated Mean</td>
<td>4.63</td>
<td>1.49</td>
</tr>
</tbody>
</table>

\(^a\) Based upon: 1= Corresponds not at all, 2= Corresponds very little, 3= Corresponds little, 4= Corresponds moderately 5= Corresponds enough, 6= Corresponds a lot, 7= Corresponds exactly
Table 7

*An In-depth breakdown of Identified Regulation (n = 178)*

<table>
<thead>
<tr>
<th>Why did you recently engage in online learning?</th>
<th>Corresponds not at all</th>
<th>Corresponds very little</th>
<th>Corresponds little</th>
<th>Corresponds moderately</th>
<th>Corresponds enough</th>
<th>Corresponds a lot</th>
<th>Corresponds exactly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>By personal decision</td>
<td>16</td>
<td>9.0</td>
<td>7</td>
<td>3.9</td>
<td>15</td>
<td>8.4</td>
<td>31</td>
</tr>
<tr>
<td>Because I am doing it for my own good</td>
<td>14</td>
<td>7.9</td>
<td>8</td>
<td>4.5</td>
<td>14</td>
<td>7.9</td>
<td>26</td>
</tr>
<tr>
<td>Because I think that online learning serves me best</td>
<td>19</td>
<td>10.7</td>
<td>18</td>
<td>10.1</td>
<td>15</td>
<td>8.4</td>
<td>29</td>
</tr>
</tbody>
</table>
Because I believe online learning is important for me.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>18.0</td>
<td>18</td>
<td>10.1</td>
<td>18</td>
<td>10.1</td>
<td>32</td>
<td>18.0</td>
<td>25</td>
<td>14.0</td>
</tr>
<tr>
<td>29</td>
<td>16.3</td>
<td>22</td>
<td>12.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.*
Table 8

*An Overview of External Regulation (n = 178)*

<table>
<thead>
<tr>
<th>Why did you recently engage in online learning?</th>
<th>Mean&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because I feel that I have to participate in online learning.</td>
<td>3.93</td>
<td>2.26</td>
</tr>
<tr>
<td>Because I don’t have any other choice.</td>
<td>3.87</td>
<td>2.32</td>
</tr>
<tr>
<td>Because online learning is something I have to do.</td>
<td>3.35</td>
<td>2.10</td>
</tr>
<tr>
<td>Because I am supposed to do online learning</td>
<td>2.91</td>
<td>2.15</td>
</tr>
<tr>
<td>Summated Mean</td>
<td>3.51</td>
<td>2.18</td>
</tr>
</tbody>
</table>

<sup>a</sup>Based upon: 1= Corresponds not at all, 2= Corresponds very little, 3= Corresponds little, 4= Corresponds moderately 5= Corresponds enough, 6= Corresponds a lot, 7= Corresponds exactly
Table 9
*An In-depth breakdown of External Regulation (n = 178)*

<table>
<thead>
<tr>
<th>Why did you recently engage in online learning?</th>
<th>Corresponds not at all</th>
<th>Corresponds very little</th>
<th>Corresponds little</th>
<th>Corresponds moderately</th>
<th>Corresponds enough</th>
<th>Corresponds a lot</th>
<th>Corresponds exactly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Because I feel that I have to participate in online learning.</td>
<td>54</td>
<td>30.3</td>
<td>26</td>
<td>14.6</td>
<td>14</td>
<td>7.9</td>
<td>21</td>
</tr>
<tr>
<td>Because I don’t have any other choice.</td>
<td>47</td>
<td>26.4</td>
<td>17</td>
<td>9.6</td>
<td>17</td>
<td>9.6</td>
<td>22</td>
</tr>
<tr>
<td>Because online learning is something I have to do.</td>
<td>45</td>
<td>25.3</td>
<td>14</td>
<td>7.9</td>
<td>16</td>
<td>9.0</td>
<td>25</td>
</tr>
</tbody>
</table>
Because I am supposed to do online learning

<table>
<thead>
<tr>
<th></th>
<th>75</th>
<th>42.1</th>
<th>23</th>
<th>12.9</th>
<th>16</th>
<th>9.0</th>
<th>14</th>
<th>7.9</th>
<th>11</th>
<th>6.2</th>
<th>19</th>
<th>10.7</th>
<th>16</th>
<th>9.0</th>
</tr>
</thead>
</table>

*Total not yielding 178 due to missing data.*
### Table 10
*An Overview of Amotivation (n = 178)*

Why did you recently engage in online learning?

<table>
<thead>
<tr>
<th>Response</th>
<th>Mean&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I participate in online learning but I am not sure if it is worth it.</td>
<td>2.38</td>
<td>1.60</td>
</tr>
<tr>
<td>I participate in online learning, but I am not sure it is a good thing to continue it.</td>
<td>2.36</td>
<td>1.76</td>
</tr>
<tr>
<td>There may be good reasons to do this online learning, but personally I don’t see any</td>
<td>2.12</td>
<td>1.48</td>
</tr>
<tr>
<td>I don’t know; I don’t see what online learning does for me.</td>
<td>1.85</td>
<td>1.34</td>
</tr>
<tr>
<td><strong>Summated Mean</strong></td>
<td>2.18</td>
<td>1.33</td>
</tr>
</tbody>
</table>

<sup>a</sup>Based upon: 1= Corresponds not at all, 2= Corresponds very little, 3= Corresponds little, 4= Corresponds moderately 5= Corresponds enough, 6= Corresponds a lot, 7= Corresponds exactly
Table 11

An In-depth breakdown of Amotivation ($n = 178$)

<table>
<thead>
<tr>
<th>Why did you recently engage in online learning?</th>
<th>Item</th>
<th>$f$</th>
<th>$%$</th>
<th>$f$</th>
<th>$%$</th>
<th>$f$</th>
<th>$%$</th>
<th>$f$</th>
<th>$%$</th>
<th>$f$</th>
<th>$%$</th>
<th>$f$</th>
<th>$%$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I participate in online learning but I am not sure if it is worth it</td>
<td>78</td>
<td>43.8</td>
<td>32</td>
<td>18.0</td>
<td>22</td>
<td>12.4</td>
<td>23</td>
<td>12.9</td>
<td>11</td>
<td>6.2</td>
<td>7</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>I participate in online learning, but I am not sure it is a good thing to continue it</td>
<td>88</td>
<td>49.4</td>
<td>28</td>
<td>15.7</td>
<td>18</td>
<td>10.1</td>
<td>13</td>
<td>7.3</td>
<td>13</td>
<td>7.3</td>
<td>12</td>
<td>6.7</td>
</tr>
</tbody>
</table>
There may be good reasons to do this online learning, but personally I don’t see any.

I don’t know; I don’t see what online learning does for me.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>11</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>91</td>
<td>51.1</td>
<td>30</td>
<td>16.9</td>
<td>21</td>
<td>11.8</td>
<td>21</td>
<td>11.8</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>108</td>
<td>60.7</td>
<td>27</td>
<td>15.2</td>
<td>17</td>
<td>9.6</td>
<td>11</td>
<td>6.2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.*
Research Objective Four

Research objective four sought to describe the motivation of online distance learning students based on their characteristics. Table 12 shows the mean level of motivation in relation to sex (female and male). This research shows that there are 64 or 36% more females than males in the responding population of students in online classes within the Outreach College. Although there is a much larger percentage of females in the group, sex had no bearing of the level of motivation of these students. Both males and females in this study reported that Identified Regulation “corresponds enough” to their attitude about online learning.

Marital status in comparison to the motivational level is found in Table 13. This table shows that the external regulation was found to be higher in widowed individuals. Married, separated, and never married individuals had the highest level of Identified regulation. The total mean for Identified Regulation was above average, with a mean of 4.62. Intrinsic motivation \((M=3.46)\) and External Regulation \((M=3.52)\) were close in total mean, while Amotivation was smallest with a mean of 2.19.

Table 14 shows the distribution of the mean in comparison to educational level. For one or more years of college, External Regulation showed the highest mean \((M=5.25)\). Respondents with an associate’s degree, a Bachelor’s degree, a Master’s degree, and a Doctorate degree all showed a higher level of Identified Regulation. Respondents with one or more years of college Identified Regulation identified the smallest mean \((M=2.65)\). Amotivation ranked lowest mean \((M= 2.18)\) among the educational levels.
**Table 12**  
*Motivational Scale by Sex (n = 172)*

<table>
<thead>
<tr>
<th>Sex</th>
<th>Intrinsic Motivation</th>
<th>Identified Regulation</th>
<th>External Regulation</th>
<th>Amotivation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>Mean</td>
<td>3.43</td>
<td>4.58</td>
<td>3.71</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>119</td>
<td>119</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.65</td>
<td>1.57</td>
<td>1.72</td>
</tr>
<tr>
<td>Male</td>
<td>Mean</td>
<td>3.54</td>
<td>4.74</td>
<td>3.14</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>55</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.44</td>
<td>1.34</td>
<td>1.79</td>
</tr>
<tr>
<td>Total</td>
<td>Mean</td>
<td>3.46</td>
<td>4.63</td>
<td>4.63</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>174</td>
<td>174</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.50</td>
<td>1.50</td>
<td>1.76</td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.*
Table 13

*Motivational Scale by Marital Status (n = 178)*

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Intrinsic Motivation</th>
<th>Identified Regulation</th>
<th>External Regulation</th>
<th>Amotivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now Married</td>
<td>Mean: 3.51</td>
<td>4.83</td>
<td>3.35</td>
<td>2.07</td>
</tr>
<tr>
<td></td>
<td>n: 103</td>
<td>103</td>
<td>101</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>SD: 1.56</td>
<td>1.38</td>
<td>1.70</td>
<td>1.26</td>
</tr>
<tr>
<td>Widowed</td>
<td>Mean: 5.50</td>
<td>5.00</td>
<td>6.50</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>n: 1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>SD: 0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Divorced</td>
<td>Mean: 3.22</td>
<td>4.63</td>
<td>3.34</td>
<td>2.36</td>
</tr>
<tr>
<td></td>
<td>n: 20</td>
<td>20</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>SD: 1.66</td>
<td>1.79</td>
<td>1.76</td>
<td>1.70</td>
</tr>
<tr>
<td>Separated</td>
<td>Mean: 3.50</td>
<td>4.75</td>
<td>3.25</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>n: 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>SD: 1.76</td>
<td>1.41</td>
<td>2.47</td>
<td>0.17</td>
</tr>
<tr>
<td>Never Married</td>
<td>Mean: 3.40</td>
<td>4.13</td>
<td>3.89</td>
<td>2.45</td>
</tr>
<tr>
<td></td>
<td>n: 47</td>
<td>47</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>SD: 1.64</td>
<td>1.53</td>
<td>1.84</td>
<td>1.32</td>
</tr>
<tr>
<td>Total</td>
<td>Mean: 3.46</td>
<td>4.62</td>
<td>3.52</td>
<td>2.19</td>
</tr>
<tr>
<td></td>
<td>n: 173</td>
<td>173</td>
<td>170</td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>SD: 1.59</td>
<td>1.49</td>
<td>1.76</td>
<td>1.34</td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.
Table 14

*Motivational Scale by Education Level (n = 178)*

<table>
<thead>
<tr>
<th>Education Completed</th>
<th>Intrinsic Motivation</th>
<th>Identified Regulation</th>
<th>External Regulation</th>
<th>Amotivation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1 or more years of college</td>
<td>3.00</td>
<td>1.40</td>
<td>2.65</td>
<td>1.49</td>
</tr>
<tr>
<td>n</td>
<td>5</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Associate Degree</td>
<td>3.56</td>
<td>1.52</td>
<td>4.81</td>
<td>1.43</td>
</tr>
<tr>
<td>n</td>
<td>16</td>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>3.58</td>
<td>1.53</td>
<td>4.68</td>
<td>1.49</td>
</tr>
<tr>
<td>n</td>
<td>86</td>
<td></td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>3.29</td>
<td>1.62</td>
<td>4.74</td>
<td>1.35</td>
</tr>
<tr>
<td>n</td>
<td>57</td>
<td></td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Professional Degree</td>
<td>3.33</td>
<td>2.40</td>
<td>3.87</td>
<td>2.01</td>
</tr>
<tr>
<td>n</td>
<td>6</td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td>3.87</td>
<td>2.02</td>
<td>4.93</td>
<td>1.85</td>
</tr>
<tr>
<td>n</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.46</td>
<td>1.59</td>
<td>4.63</td>
<td>1.50</td>
</tr>
<tr>
<td>n</td>
<td>174</td>
<td></td>
<td>174</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>1.59</td>
<td></td>
<td>1.50</td>
<td></td>
</tr>
</tbody>
</table>

*Total not yielding 178 due to missing data.
Chapter V

Conclusions, Implications, and Recommendations

Purpose and Research Questions/objectives
The Purpose of this study was to describe the type of motivation among students in an online learning environment.

Research Objectives
1. Describe students on selected (age, sex, year in school, ethnicity, education, employment status, internet access and use) demographic characteristics.
2. Describe synchronous and asynchronous distance learning environments.
3. Describe the type (intrinsic, identified regulation, external regulation or a motivation) of motivation students possess while participating in an online learning environment.
4. Describe the type of motivation by selected student demographic characteristics.

Research Objective One

Data from Objective one showed students’ characteristics in online learning courses. This data showed that the typical online learner profile is predominantly a white female that has completed a bachelor’s degree. In addition, Objective one showed a strong majority of online learners are married. Furthermore, the data showed that the majority of individuals have completed their Bachelor’s Degree. This study sought to target students in graduate courses, in the Outreach College. It is the assumption that all students are at the graduate level although the data showed that a percentage had only completed an Associate’s Degree and students had only attended one or more years of college with no degree. With this said, the researcher has concluded that this may be due to students enrolled in a course that encompasses both graduate and undergraduate credits.
Research Objective Two

Objective two sought simply to describe the learning environments of online learners. The most frequently occurring environment was an Asynchronous method. Research shows that Synchronous learning environments have a positive effect on motivation due to the feeling of relatedness (Deci & Ryan, 1995). Every Asynchronous environment yields a higher frequency than Synchronous. Knowing that a synchronous learning environment is linked to positive motivation and, therefore, yields less attrition rates in courses. It is the researcher’s recommendation that the department reviews the learning environment of courses and brings in more synchronous classes to online learning.

Research Objective Three

The data for research objective three showed the highest average mean for Identified Regulation registering a “corresponds enough” with learners, “corresponds moderately” is associated with External Regulation, “corresponds little” is associated with Intrinsic Motivation and “corresponds very little” was associated with Amotivation. These seven points of the SIMS reveal the motivational level for graduate Online Learners in the Outreach College. The SIMS registered the population of learners associated with Identified Regulation. Students who complete online courses have a more self-regulated type of motivation (Identified Regulation) according to the SIMS scale, please refer to Figure 1. If a student’s motivation level is Identified regulation or Intrinsic motivation then they will have a much higher success rate. Jones & Issroff (2007) suggest many factors are responsible for the success of online learning and Intrinsic motivation is a crucial aspect of online accomplishment. Muilenburg & Berge’s (2007) research
supports that high dropout rates in online courses at the college level have been associated with poor motivation. The most sought after level of motivation for students is Intrinsic motivation, this research shows students in an Identified regulation level of motivation. It is recommended that teachers assess their curriculum so that it facilitates behaviors associated with Intrinsic motivation.

*Research Objective Four*

Objective four showed the connection between motivation and characteristics are not related to sex nor related to marital status. This research also supports that more synchronous learning environments give students a more Internal or Identified form of motivation, which is what teachers seek. Students with one or more years of college or no degree have a positive relationship with External Regulation. External Regulation is on the lower end of the motivational scale (see Figure 1). The other marital statuses do not impede on motivation. Students with more years of college are showing a more internal type of motivation. The lower end of the motivational scale is negatively correlated with graduation rates (Garrison, 1997). Due to this idea, it is recommended that students enroll in classes that are within their means and competence level to complete in an attempt to increase graduation rates. It is a conclusion that marital status and education level may indicate responsibility and, therefore, Identified Regulation would be an understandable description for these individuals. Students that are registering with either Identified regulation or Intrinsic motivation, are more likely to graduate as backed by (Harnett 2011; Crotty, 2012) theories on retention. Therefore, it recommended that teachers in the Outreach College implement additional tactics to make their courses fit the education level of their students and employ extra help to those undergraduate
students registered in graduate courses. Research supports that if classes are not in
students’ range of abilities, motivation is greatly reduced (Bandura, 1995). Also, it is
necessary for teachers to design a synchronous learning environment as a way of
increasing graduation rates by having students more self-regulated. When teachers
consider learning environments they are not to distinguish between sex or ethnicity but
possibly education level.

The graduate online learning courses within the Outreach College are largely
successful in connecting students to The University of Arizona and various components
of its structure. Students who complete these courses as masters, doctorate or
professional degree seeking students are more likely to graduate, but students with lesser
education may not be as self-regulated or Intrinsically motivated to complete the course.

Recommendations for Further Research

This study was limited by available data due to recent changes in University email
providers and the timeline for research. Future researchers should employ a longer
timeline for this study in order to maximize results. This study was completed in seven
days and it is possible that responders were more dedicated than that of non-responders.
By determining non-respondents, results researchers would have a clearer picture of the
overall motivational scale. In addition, they should follow students from the time they
begin at The University of Arizona through graduation and compare those who complete
undergraduate online courses to those who enrolled in graduate online courses. These
data would be instrumental in revealing the bigger picture of the course. Furthermore,
researchers should conduct the study earlier in the semester. If there were students that
were frustrated with the online courses and had weak motivation they would have already
dropped the course by the time the study was conducted. Further research should not only focus on retention in relation to motivation but also student performance.
References


http://www.ed.psu.edu/acsde/deos/deosnews/deosnews13_5.pdf


Crotty, J. (2012, November 14). Distance learning has been around since 1892, you big mooc. Retrieved from http://www.forbes.com/sites/jamesmarshallcrotty/2012/11/14/distance-learning-has-been-around-since-1892-you-big-mooc/


Johnson R., Stewart C., & Bachman C., Interactive Learning Environments (2013): What drives students to complete online courses? What drives faculty to teach online? Validating a measure of motivation orientation in university students and faculty, Interactive Learning Environments


Appendix A: Panel of Experts List
Panel of Experts:

Dr. Edward Frnklin

Dr. Robert Torres

Dr. Matthew Mars

Dr. Ryan Foor
Appendix B: Institutional Review Board Approval Letters
Greetings

You have been selected to participate in a study regarding student motivation while enrolled in an online learning environment. As an online learner, your recent learning experiences can serve to advance our understanding of the types of motivation online learner's experience. The results of the research will serve to not only provide online instructors and administrators with baseline data, but also help shape and improve the development and delivery of the online curriculum.

The growth of the Internet and new technology has given instructors and students opportunities to participate in a variety of online environments. Maintaining pace with this fast changing technology is essential to keeping online instruction current.

As a recent online student, your opinions and perspectives are important to this study. We appreciate the opportunity to gain insight about your recent experience on this topic. Participants will be entered in a drawing for an iTunes gift card. There are six available gift cards to be raffled. To be entered in the drawing you must respond by April 9th at 5 pm. Participation is void where prohibited by law.

Participation in the research study is not required to be entered in the raffle.

The information you provide will be considered confidential and will be grouped with responses from other participants. Once the data collection is complete, the linkages from your email and information will be destroyed.

If after receiving this email, you have any questions about this study, or would like additional information to assist you in reaching a decision about your participation, please feel free to contact Professor Robert Torres at 520-621-7173 (rtorres1@email.arizona.edu).

We would like to assure you that this study has been reviewed and received ethics clearance through the University of Arizona Institutional Review Board. However, the final decision about participation is yours. Should you have comments or concerns resulting from your participation in this study, please contact the Office of Human Subjects Protection Program at 520-626-6721 or VPR-IRB@email.arizona.edu.

By completing this survey you are allowing your data to be used for research purposes.
Date: April 07, 2014
Principal Investigator: Ashley Jo Haller
Protocol Number: 1401189175A001
Protocol Title: A Descriptive Study of Student Motivation in an Online Distance Learning Environment
Level of Review: Exempt
Determination: Approved
Expiration Date: 

This submission meets the criteria for approval under 45 CFR 46.110, 45 CFR 111 and/or 21 CFR 50 and 21 CFR 56.

- The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).
- All research procedures should be conducted in full accordance with all applicable sections of the Investigator Manual.
- The current consent with the IRB approval stamp must be used to consent subjects.
- The Principal Investigator should notify the IRB immediately of any proposed changes that affect the protocol and report any unanticipated problems involving risks to participants or others.
- For projects that wish to continue after the expiration date listed above please submit an P212, Continuing Review Progress Report, forty-five (45) days before the expiration date to ensure timely review of the project.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HSPP Office. If subjects will be consented the approved consent(s) are attached to the approval notification from the HSPP Office.

This project has been reviewed and approved by an IRB Chair or designee.
No changes to a project may be made prior to IRB approval except to eliminate apparent immediate hazard to subjects.
Appendix C: Questionnaire
Part I

Greetings:

You have been selected to participate in a study regarding student motivation while enrolled in an online learning environment. As an online learner, your recent learning experiences can serve to advance our understanding of the types of motivation online learner’s experience. The results of the research will serve to not only provide online instructors and administrators with baseline data, but also help shape and improve the development and delivery of the online curriculum.

The growth of the Internet and new technology has given instructors and students opportunities to participate in a variety of online environments. Maintaining pace with this fast changing technology is essential to keeping online instruction current.

As a recent online student, your opinions and perspectives are important to this study. We appreciate the opportunity to gain insight about your recent experience on this topic. Participants will be entered in a drawing for an iTunes gift card. There are six available gift cards to be raffled. To be entered in the drawing you must respond by April 14th at 5 pm. Participation is void where prohibited by law. Participation in the research study is not required to be entered in the raffle.

The information you provide will be considered confidential and will be grouped with responses from other participants. Once the data collection is complete, the linkages from your email and information will be destroyed.

If after receiving this email, you have any questions about this study, or would like additional information to assist you in reaching a decision about your participation, please feel free to contact Professor Robert Torres at 520-621-7173 (torresl@email.arizona.edu).

We would like to assure you that this study has been reviewed and received ethics clearance through the University of Arizona Institutional Review Board. However, the final decision about participation is yours. Should you have comments or concerns resulting from your participation in this study, please contact the Office of Human Subjects Protection Program at 520-626-6721 or VPR-IRB@email.arizona.edu.

By completing this survey you are allowing your data to be used for research purposes.
Part I: Motivation for Participating in an On-line Learning Environment

Directions: Below are several items regarding motivation. Please read each item carefully. Using the scale below, select the radio button that best describes the reason why you engaged in online learning. RESPONSE to each item according to the following CORRESPOND scale:

1: Not at All; 2: VERY LITTLE; 3: LITTLE; 4: MODERATELY; 5: ENOUGH; 6: A LOT; 7: EXACTLY.

Why did you recently engaged in online learning?
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<thead>
<tr>
<th>Reason</th>
<th>corresponds not at all</th>
<th>corresponds very little</th>
<th>corresponds little</th>
<th>corresponds moderately</th>
<th>corresponds enough</th>
<th>corresponds a lot</th>
<th>corresponds exactly</th>
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<tr>
<td>1. Because I think that online learning is interesting</td>
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<td>2. Because I am doing it for my own good</td>
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<td>3. Because I am supposed to do online learning</td>
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<td>4. There may be good reasons to do this online learning, but personally I don't see any</td>
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<td>5. Because I think that online learning is pleasant</td>
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<td>6. Because I think that online learning serves me best</td>
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<td>7. Because online learning is something that I have to do</td>
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<td>8. I participate in online learning but I am not sure if it is worth it</td>
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<td>9. Because online learning is fun</td>
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<td>10. By personal decision</td>
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<td>11. Because I don't have any choice</td>
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<td>12. I don't know, I don't see what online learning does for me</td>
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<td>13. Because I feel good when participating in online learning</td>
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<td>14. Because I believe online learning is important for me</td>
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<td>15. Because I feel that I have to participate in online learning</td>
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<td>16. I participate in online learning, but I am not sure if it is a good thing to continue it</td>
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Part II: Online Learning Environments

There are a variety of online learning environments. The following are synchronous online class elements. From your most RECENT online learning experiences, please check the environment that you have experienced. (Check all that apply).

Should you have a need, next to each element is a brief description of each.

- Chat (text only): Synchronous chat rooms allow multiple users to log in and interact. Voice (telephone or voice-over IP): Sometimes you’ll be asked to dial into a toll-free number, or to log into a website where you’ll speak through your built-in microphone or a headset. The purpose is to have a conference call with your instructor and/or fellow students.

- Video conferencing: Usually, a video conference (or web conference) will involve two webcams operating – the instructor’s and that of another key person. A video conference can involve a live feed from a classroom or elsewhere. Alternatively, the conference might transmit a presentation of slides and graphics, with a question and answer session at the end.

- Web conferencing: What differentiates a web conference from a video conference is the fact that you’ll probably not rely on video as your primary instructional content. Instead, you’re likely to access a wider variety of media elements. Web conferences tend to be more interactive, and you’ll probably be asked to respond to questions (survey, poll, questionnaire), which will give you a chance to interact. Web conferences usually incorporate chat and they often have a question and answer session at the end.

- Internet radio/podcasts: Instructors might stream the audio over the Internet. With Internet radio / streaming audio students can send chat messages while the event is happening.

- Voice (telephone or voice-over IP): Sometimes you’ll be asked to dial into a toll-free number, or to log into a website where you’ll speak through your built-in microphone or a headset. The purpose is to have a conference call with your instructor and/or fellow students.

- Virtual worlds: Educational “islands” in virtual worlds like Second Life are wonderful places for students to meet “live” and to interact. It’s possible to speak with each other through headsets and VoIP.
There are a variety of online learning environments. The following are **asynchronous online class elements**. From your most recent online learning experiences, please check the environment that you have experienced. (Check all that apply).

Should you have a need, next each element is a brief description of each.

- **Video**: Your online course will provide you with instructional materials. They could consist of articles (often in PDF format) that you download from a virtual library. You may also be asked to download presentations, slides, and illustrative graphics. In addition, you may have instructional materials that consist of video snippets, audio files, and even full-length movies such as documentaries. In this case, you'll often have the option to stream the content rather than having to download an enormous file.

- **E-mail**: Tool for asking questions, keeping in touch, and receiving materials, updates, reminders, and even assessments. Some online courses use e-mail as the main way to interact with your instructor and peers.

- **Discussion Boards**: The discussion board is another pillar in the online learning structure. It's a great way to respond to questions and to share documents and links. It's also a good place to ask questions and to clear up ambiguities.

- **Social Networking**: Many online courses now incorporate social networking in order to enhance collaboration and learner interaction. In many learning management systems, social networking is built into units via embedded HTML scripts. Social networking programs that are often incorporated include blogs, wikis, Facebook, Orkut, Bebo, Twitter, Flickr, Youtube, Youstream, and more.

- **Wiki and/or Collaborative Documents**: Collaborative documents allow students to edit each other's work and to collaborate. A "wiki" is a place that allows you to build a definition or a series of explanations—much in the way that Wikipedia works. You can add text as well as graphics.

- **e-Portfolios**: E-Portfolios demonstrate your skills and your knowledge of a special topic. They are often assigned as a capstone project in which students combine text, images, presentations, video, audio, links, and a discussion space.

- **DVD/CD-ROM**: Some courses provide textbooks that come bundled with DVDs for video and media content.
Part III - Personal Characteristics

Please select the response choice that best describes you.

What is your sex?

☐ Female
☐ Male

What year were you born?

Year
What is this your race? Please mark one or more boxes.

☐ White
☐ Black, African Am., or Negro
☐ American Indian or Alaska Native
☐ Asian Indian
☐ Chinese
☐ Filipino
☐ Other Asian
☐ Japanese
☐ Korean
☐ Vietnamese
☐ Native Hawaiian
☐ Guamanian or Chamorro
☐ Samoan
☐ Other Pacific Islander
☐ Other

Are you of Hispanic, Latino, or Spanish origin?

NOTE: Please answer BOTH the Question about Hispanic origin and the Question about race. For this survey, Hispanic origins are not races.

☐ No, not of Hispanic, Latino, or Spanish origin
☐ Yes, Mexican, Mexican Am., Chicano
☐ Yes, Puerto Rican
☐ Yes, Cuban
☐ Yes, another Hispanic, Latino, or Spanish origin
What is your marital status?

- Married
- Widowed
- Divorced
- Separated
- Never married

What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.

- 12th grade, no diploma
- High school graduate - high school diploma or the equivalent (for example: GED)
- Some college credit, but less than 1 year
- 1 or more years of college, no degree
- Associate degree (for example: AA, AS)
- Bachelor's degree (for example: BA, AB, BS)
- Master's degree (for example: MA, MS, MEng, MED, MSW, MBA)
- Professional degree (for example: MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example: PhD, EdD)
PART IV: Please identify your experience with use of technology.

How long have you been using the Internet (including using email, D2L, social media, etc.)?

- Less than 6 months
- >6 to 12 months
- >1 to 3 years
- >3 to 6 years
- >6 years

Generally speaking, how comfortable do you feel using a computer for online learning?

- Very comfortable
- Somewhat comfortable
- Not very comfortable
- Not at all comfortable
How often do you use the Internet?

- Never
- Less than Once a Month
- Once a Month
- 2-3 Times a Month
- Once a Week
- 2-3 Times a Week
- Daily
Appendix D: Advanced notice email
Greetings ${m://FirstName}:

You have been selected to participate in a study regarding student motivation while enrolled in an online learning environment. As an online learner, your recent learning experiences can serve to advance our understanding of the types of motivation online learners experience. The results of the research will serve to not only provide online instructors and administrators with baseline data, but also help shape and improve the development and delivery of the online curriculum. If you agree to participate, you will need to complete a 10-minute questionnaire about your online educational experience at The University of Arizona. You may be assured of complete confidentiality.

Follow this link to the Survey:  ${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:  ${l://SurveyURL}

Follow the link to opt out of future emails:  ${l://OptOutLink?d=Click here to unsubscribe}

An Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research. Participants will be entered in a drawing for an iTunes gift card. There are six available gift cards to be raffled. To be entered in the drawing you must respond by April 14th at 5 pm. Participation is void where prohibited by law. Participation in the research study is not required to be entered in the raffle.

Best Wishes,

Ashley Haller
Principal Investigator
ahaller@email.arizona.edu

Dr. Robert Torres
Professor
rtorres1@email.arizona.edu
Appendix E: Purpose letter with questionnaire
Greetings:

You have been selected to participate in a study regarding student motivation while enrolled in an online learning environment. As an online learner, your recent learning experiences can serve to advance our understanding of the types of motivation online learners experience. The results of the research will serve to not only provide online instructors and administrators with baseline data, but also help shape and improve the development and delivery of the online curriculum. The growth of the Internet and new technology has given instructors and students opportunities to participate in a variety of online environments. Maintaining pace with this fast changing technology is essential to keeping online instruction current. As a recent online student, your opinions and perspectives are important to this study. We appreciate the opportunity to gain insight about your recent experience on this topic. Participants will be entered in a drawing for an iTunes gift card. There are six available gift cards to be raffled. To be entered in the drawing you must respond by April 14th at 5 pm. Participation is void where prohibited by law. Participation in the research study is not required to be entered in the raffle.

Follow this link to the Survey:  
Or copy and paste the URL below into your internet browser: 

Follow the link to opt out of future emails: 

Your involvement in this survey is entirely voluntary and there are no known or anticipated risks to participation in this study. If you agree to participate, the survey should not take more than about ten minutes. The questions are quite general (for example, Why are you currently engaged in this activity?) However, you may decline answering any questions you feel you do not wish to answer. The information you provide will be considered confidential and will be grouped with responses from other participants. Once the data collection is complete, the linkages from your email and information will be destroyed. If after receiving this email, you have any questions about this study, or would like additional information to assist you in reaching a decision about your participation, please feel free to contact Professor Robert Torres at 520-621-7173 (rtorres1@email.arizona.edu).

We would like to assure you that this study has been reviewed and received ethics clearance through the University of Arizona Institutional Review Board. However, the final decision about participation is yours. Should you have comments or concerns resulting from your participation in this study, please contact the Office of Human Subjects Protection Program at 520-626-6721 or VPR-IRB@email.arizona.edu Thank you for your interest in this project.

Best Wishes,

Ashley Haller
Principal Investigator
ahaller@email.arizona.edu

Dr. Robert Torres
Professor
rtorres1@email.arizona.edu
Appendix F: Questionnaire reminder
Greetings ${m://FirstName}:

This is a reminder that you have the opportunity to assist in improving the quality of the distance learning experience at the University of Arizona. Should you wish to participate, please complete the online questionnaire, which will take about ten minutes. The information you share will remain confidential. Your participation should be considered voluntary and you may withdraw at any time from this study without penalty.

Participants will be entered in a drawing for an iTunes gift card. There are six available gift cards to be raffled. To be entered in the drawing you must respond by April 14th at 5 pm. Participation is void where prohibited by law. Participation in the research study is not required to be entered in the raffle. Once the data collection is complete; the linkages from your email and information will be destroyed. Further, you will not be identified by name in any report or publication resulting from this study. The raw data collected will be kept for a period of six years as required by Human Subjects Institutional Review Board in my supervisor's office/lab at the University of Arizona. If you would like to participate in this survey please,

**Follow this link to the Survey:**  ${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:  ${l://SurveyURL}

Follow the link to opt out of future emails:  ${l://OptOutLink?d=Click here to unsubscribe}

The Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Best Wishes,

Ashley Haller  Dr. Robert Torres
Principal Investigator  Professor
ahaller@email.arizona.edu  rtorres1@email.arizona.edu
Appendix G: Final Reminder
Greetings ${m://FirstName}:

This is a reminder that this is the last day you are able to have the opportunity to assist in improving the quality of the distance learning experience at the University of Arizona. Should you wish to participate, please complete the online questionnaire, which will take about ten minutes. The information you share will remain confidential. Your participation should be considered voluntary and you may withdraw at any time from this study without penalty. Participants will be entered in a drawing for an iTunes gift card. There are six available gift cards to be raffled.

To be entered in the drawing you must respond by April 14th at 5 pm. Participation is void where prohibited by law. Participation in the research study is not required to be entered in the raffle. Once the data collection is complete; the linkages from your email and information will be destroyed. Further, you will not be identified by name in any report or publication resulting from this study. The raw data collected will be kept for a period of six years as required by Human Subjects Institutional Review Board in my supervisor's office/lab at the University of Arizona. If you would like to participate in this survey please,

**Follow this link to the Survey:**  ${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:  ${l://SurveyURL}

Follow the link to opt out of future emails:  ${l://OptOutLink?d=Click here to unsubscribe}

The Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Best Wishes,

Ashley Haller  
Investigator

ahaller@email.arizona.edu

Dr. Robert Torres  
Principal Professor

rtorres1@email.arizona.edu