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**Academic Motivation of Degree-seeking Undergraduate Students at a
For-profit University in the United States**

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**Academic Motivation of Degree-seeking Undergraduate Students at a
For-profit University in the United States**

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Abstract

Academic Motivation of Degree-seeking Undergraduate Students at a For-profit University in the United States

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Students attending for-profit colleges and universities represent approximately 11% of the undergraduate population yet little is known about their academic motivation while attending. The Academic Motivation Scale (AMS) (Vallerand, Pelletier, Briere, Senecal, & Vallieres, 1992), grounded in self-determination theory (Deci & Ryan, 1985b), has been used successfully for numerous studies. The AMS has not been tested with a for-profit student population. The AMS and personal data questionnaire were administered via an Internet survey hosted by Survey Gizmo to for-profit students attending face-to-face classes in the United States. The study uses an exploratory design where subjects were selected using a convenience sample ($N = 44$). Cronbach's alpha was calculated to measure the internal consistency and reliability of the AMS with for-profit students. Cronbach's alpha was greater than 0.70 for all the AMS's seven subscales and two aggregate scales implying the AMS is appropriate for use with for-profit student populations. The study evaluated possible correlations between academic motivation and age. Spearman's rho

correlation coefficient calculations revealed no statistically significant relationship between academic motivation and age. Academic motivation was also tested a predictor of self-reported GPA via ordinary least squares regression. A natural log transformation was conducted to restate the data into a more normal distribution. After transformation, GPA was not a statistically significant predictor of GPA. The aggregate measure of extrinsic motivation was statistically significantly higher than the aggregate measure of intrinsic motivation. No statistically significant difference was found among the three extrinsic motivation subscales. Intrinsic motivation to experience was statistically significantly different than intrinsic motivation to know and intrinsic motivation to accomplish. Cronbach's alpha was "good" or better for all measure of academic motivation. No statistically significant relationship was found among academic motivation and age. Academic motivation was not revealed to be a useful predictor of GPA.

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CHAPTER 1: INTRODUCTION

There are over thirteen-hundred for-profit postsecondary schools in the United States. “Roughly half of these give college degrees” (Bok, 2013, p. 13). Most for-profit universities are open enrollment institutions with minimal requirements for admission. Similar to community colleges, for-profit university admission standards require students to have a high school diploma or GED to enroll. For a variety of reasons, for-profit college and university (FPCU) student populations are more diverse compared to national averages at nonprofit and public colleges.

African Americans account for 13 percent of all students in higher education, but they are 22 percent of those in the for-profit sector. Hispanics are 11.5 percent of all students but are 15 percent of those in the for-profit sector. Women are 65 percent of those in the for-profit sector. For-profit students are older: about 65 percent are 25 years and older, whereas just 31 percent of those at four-year public colleges are, and 40 percent of those at two-year colleges are. (D. J. Deming, Goldin, & Katz, 2012, p. 146)

FPCUs attract African Americans and women at higher rates than do their fellow nonprofit and public institutions. FPCUs also attract students from lower socioeconomic status (SES) backgrounds.

Some students at FPCUs are from “disadvantaged backgrounds” (D. Deming, Goldin, & Katz, 2013, p. 138). Lower SES students may have difficulty funding their postsecondary education without using federally funded student loans, Pell Grants, or institutionally sponsored scholarships. FPCUs are “heavily subsidized by Pell Grants and educational loans from the federal government” (Bok, 2013, p. 12). While accounting for

approximately 11% of the total college student population (D. J. Deming et al., 2012), FPCU students “were awarded 24 percent of all Pell Grants and 26 percent of federally guaranteed loans while incurring larger debts than nonprofit students” (Bok, 2013, pp. 12-13). Student loan debt is often acquired by individuals hoping that a degree will lead to improved employment prospects (Bok, 2013; D. J. Deming et al., 2012). Current research on the for-profit higher education sector investigates these topics and others, such as, why students choose for-profit colleges (Chung, 2012; D. Deming et al., 2013; Shah, Nair, & Bennett, 2013), how for-profit colleges’ operating models differ from more traditional colleges (Embree, 2001; A. O. Hughes, 1997; M. D. Hughes, 2006; Rutherford, 2002), and the cost of a for-profit college education (Cellini, 2010, 2012; Laband & Lentz, 2004). To date, there has been little systematic research into students attending FPCUs in general, and even less research into FPCU students’ academic motivation in particular. Given the size of the student population attending for-profit colleges and universities, it is problematic for researchers, administrators, and policy makers because of the paucity of literature investigating the motivations of matriculated for-profit students. This exploratory study begins to address that problem and the limited research found in the literature concerning the academic motivation of students attending for-profit college and universities.

Some students at FPCUs may be academically motivated by potential pay-offs that earning a college degree may bring after graduation. Other students may be academically motivated by the sheer enjoyment they derive from learning. Some students may have enrolled with clear intention but begin to question why they continue to attend.

Each of these examples points to a different type of academic motivation. If academic motivation is to be studied, a theoretical framework within which each type of the academic motivation is measured is necessary. Self-Determination Theory is one such framework and it is discussed in the next section (Deci & Ryan, 1985b; Deci & Ryan, 2000).

Background

According to Walls (2009), “self-determination theory has been extensively studied in primary, secondary, and postsecondary educational settings, since its inception and expansion in the nineteen seventies and eighties, as one of the predominant motivational constructs in educational psychology” (p.1). Research using Self-Determination Theory (SDT) continued in higher education into the 1990s and 2000s (Cokley, 2000; Guay, Mageau, & Vallerand, 2003; Ochoa, 2012; Vallerand et al., 1993). The appeal of SDT is that it can be used in a variety of educational settings. It describes more general motivation orientations rather than the relative size of a subject’s motivation (Walls, 2009). “Rather than attempting to explain and measure the magnitude of motivation within a learner, Self-Determination Theory offers an explanation of and an approach to measure the orientation of motivation within a learner” (Walls, 2009, p. 1). The motivation within SDT under consideration in this study is comprised of three broad categories. They are intrinsic motivation, extrinsic motivation, and amotivation (Deci & Ryan, 1985a; Deci & Ryan, 2000; Deci, Vallerand, Pelletier, & Ryan, 1991).

SDT holds that actions are undertaken at one's own direction. It assumes that organismic needs are satisfied prior to engaging in an activity (Deci & Ryan, 2000). SDT may be applied to a variety of human activities including academic pursuits. Consider an economics student who studies econometrics because she enjoys applied statistics. "Intrinsically motivated behaviors are engaged in for their own sake—for *the pleasure and satisfaction derived* from their performance" (Deci et al., 1991, p. 325, emphasis in original). In this example, econometrics is studied for the sheer pleasure of doing so rather than because it may lead to something external, such as, better employment prospects. Studying econometrics because it may lead to some type of future return is an example of extrinsic motivation.

Extrinsic motivation implies action is being taken to achieve something external to the self. Actions that are extrinsically motivated "are performed not out of interest but because they are believed *to be instrumental to some separable consequence*" (Deci et al., 1991, p. 325, emphasis in original). While extrinsic motivation implies an element of internalization, the student chooses to do something, which comes from within; the reason for that choice is external to the individual. Deci and Ryan (2000) indicate that "internalization is an active, natural process in which individuals attempt to transform socially sanctioned mores or requests into personally endorsed values and self-regulation" (Deci & Ryan, 2000, pp. 235-236). Consider that same econometrics student participating in a study group of like-minded students seeking better grades that they perceive are instrumental to obtaining higher future earnings.

Higher grades are identified as a means to higher potential earnings after graduation. When students identify “with the value of an activity, internalization will be fuller” (Deci & Ryan, 2000, p. 237) and the extrinsic motivation becomes more internalized. The study group could be more extrinsically motivated due to the increased internalization of that external outcome. While the presence of external rewards may affect the undertaking of a task for an extrinsically motivated activity, that same external reward may adversely affect those who are intrinsically motivated.

Providing an external reward for intrinsically motivated activity may be counterproductive.

[W]hen extrinsic rewards are introduced for doing an intrinsically interesting activity, people tend to feel controlled by the rewards, prompting a shift in the perceived locus of causality for the behavior from internal to external. People feel less like origins of their behavior and thus display less intrinsic motivation. (Deci & Ryan, 2000, p. 234)

Some students who feel intrinsically motivated may experience less intrinsic motivation in the presence of an overt external reward. Intrinsic behavior originates from within the individual and extrinsic motivation is in response to a separable outcome.

Amotivation is demonstrated by that same econometrics student, still studying econometrics, yet not knowing why (Deci et al., 1991). Amotivation is “the absence of intrinsic or extrinsic motivation” (Vallerand et al., 1992, p. 206). When asked what drives them, an amotivated econometrics student may say something like, “I don’t know why I’m studying econometrics,” or “I don’t know why I’m in school.” These are both examples of amotivation.

The academic motivation— intrinsic, extrinsic, and amotivation— of students in public and private nonprofit colleges has been measured in various studies (Angell, 2006; Bugay, 2000; Cokley, 2003; Fairchild, Horst, Finney, & Barron, 2005; Vallerand et al., 1993). To date, there is no evidence that the academic motivation of degree-seeking students at FPCUs has been measured.

Problem Statement

Degree-seeking students attending FPCUs comprise approximately 11% of the total student population in the US (Bok, 2013; Snyder & Dillow, 2012). In the aggregate, they are more diverse than their nonprofit and public counterparts and consume a disproportionate amount of federally backed financial aid (Bok, 2013; D. J. Deming et al., 2012). Federal financial aid typically comes in the form of Pell Grants and student loans. Students at FPCUs default on their student loans at relatively high rates compared to students attending public and non-profit private institutions (D. Deming et al., 2013; D. J. Deming et al., 2012; McGuire, 2012).

The average two-year default rate for all public institutions was 9.6 percent, compared with 5.2 percent for all private institutions. For-profit institutions as a sector had an average two-year default rate of 13.6 percent. But at 15 percent, community colleges appeared to have the highest two-year default rate of any type of institution. (Stafford, 2013)

FPCU students default on student loans at over twice the rate of those attending private colleges and universities. Higher default rates may be associated with whether or not FPCU graduates are gainfully employed.

The gainful employment of FPCU graduates has been a policy concern for the Department of Education (DoE) since early 2009 (Braucher, 2012). The DOE began drafting a rule intended to address the value of degrees earned by FPCU students and other non-degree-seeking students.

The [gainful-employment] rule, which was released in June 2011, applies to most programs at for-profit institutions and nondegree-granting programs at public and nonprofit private institutions. Its intent is to ensure that federal student-aid dollars flowing to those programs are good investments and are helping prepare students for jobs that pay well. (Blumenstyk & Huckabee, 2012)

The final rule was met with a lawsuit by the Association of Private Sector Colleges and Universities (APSCU), a nonprofit lobbying organization that represents several FPCUs, charging that the rule unfairly targeted FPCUs (Stafford, 2013). A federal judge agreed with the APSCU and the “gainful employment” rule was struck down prior to its effective date (Stratford, 2012). The court ruled certain provisions of the rule were capricious and, therefore, unenforceable.

The DoE began a second attempt at implementing gainful employment rules in 2012 and a revised gainful-employment rule was published in 2014 (Harvard Law Review, 2015; Hentschke & Parry, 2015).

Under the regulation, for-profit programs will only qualify as leading to gainful employment if the annual loan re-payments for graduates of the programs do not exceed on average either 8% of their total earnings or 20% of their discretionary income. (Harvard Law Review, 2015, p. 2019)

Gainful employment statistics and student loan default rates for FPCU students are measures of how students fare after they leave their respective institutions. Little is

known about FPCU students attending college in general, and less is known about their academic motivation in particular.

The academic motivation, and the relationship among academic motivation and personal characteristic—such as age and grade point average—have not been measured for degree-seeking undergraduate FPCU students in the United States. The academic motivation of this important portion of the postsecondary student population remains relatively opaque to higher education stakeholders such as, researchers, policy makers, university administrators, and faculty. The results from a systematic exploration of FPCU student’s academic motivation may have implications for higher education policy and practice.

Purpose of Study

This quantitative study explores the academic motivation of degree-seeking undergraduates at a for-profit university in the United States by using the Academic Motivation Scale (AMS). The AMS is a well-tested psychometric instrument that measures academic motivation. The study investigates what relationship, if any, exists between academic motivation and student age and evaluates the value academic motivation has for predicting self-reported grade point average (GPA). While there may be multiple factors affecting a student’s academic motivation, this study narrows the foci to academic motivations as measured by the AMS.

Research Questions

1. What are the academic motivations of degree-seeking undergraduate students attending a for-profit university in the United States?
2. What relationship, if any, exists between student age and the academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States?
3. What value, if any, does academic motivation have for predicting grade point averages for degree-seeking undergraduate students attending a for-profit university in the United States?

Hypothesis

The Academic Motivation Scale (AMS) has not been used to explore or measure the academic motivation of degree-seeking undergraduate students attending an FPCU. Although the AMS has been used to measure the academic motivation of various undergraduate student populations in private and public college and universities (Bonura, 2010; Cokley, 2000; Cokley, Bernard, Cunningham, & Motoike, 2001; Duffy, 2008; Komarraju, Karau, & Schmeck, 2009; Ochoa, 2012), researchers cannot assume the instrument will have the same reliability characteristics when used with a for-profit postsecondary student population. A detailed description of the hypotheses used to test each of the research questions is provided in Chapter 3.

Methodology

This exploratory quantitative survey study employed a well-tested and reliable psychometric survey instrument and a personal data questionnaire in a cross-sectional research design (Creswell, 2013). The instruments used are the Academic Motivation Scale (AMS) (Vallerand et al., 1993; Vallerand et al., 1992) plus a Personal Data Questionnaire (PDQ). The AMS and the PDQ were administered using commercially available survey software hosted on SurveyGizmo.com. The AMS measures extrinsic motivation, intrinsic motivation, and amotivation in college students and the PDQ gathers the self-reported age and self-reported GPA of the subjects. A national FPCU with a significant local student population agreed to allow convenience sampling at four local campuses. The host site would not allow a larger random sample to be drawn from their student population. Two other FPCUs invited to participate in the study declined as a matter of policy: They do not participate in outside research. All responses were anonymous and no personally identifiable information was gathered. A pilot test with a small sample was conducted prior to releasing the study to the larger student sample.

A pilot test was conducted to determine that the survey site was functioning properly. Subjects for the pilot test were selected from one undergraduate face-to-face class at each of the four campuses. Faculty members at each campus were asked to post a web link to the survey in their electronic class rooms and to make an announcement in class alerting students to the link.

The AMS has not been tested with students attending for-profit universities. It was assumed that the AMS was appropriate for use with for-profit students and that there was universal agreement among the subjects about the meaning of each of the 28 statements contained in the instrument. Pilot tests could have been repeated if problems with the survey's administration were discovered. The pilot test did not reveal any problems with the survey or its administration on SurveyGizmo.

The survey was released to the remaining subjects selected for the study. Similar to the pilot test, faculty members in the remaining undergraduate face-to-face classes at each campus were asked to post a web link to the survey in their electronic class rooms and to make an in class announcement alerting students to the link. Total useable responses to the study were $N = 44$.

Scope and Limitations

The scope of this study is limited to undergraduate students who attended face-to-face classes at a for-profit university in July 2015. Although many FPCU students attend online, online students were not made available by the study site. The grade point averages (GPAs) used in this study were self-reported and, as such, may be biased. Although possible, a self-reporting bias is unlikely to occur given that a previous study found adult students tend to self-report their GPAs truthfully (Revzina, 2008). This study is a cross-sectional snapshot of students attending FPCUs in a given time period. This constrains the results to one period in time and may limit the study's generalizability to for-profit student populations over time.

The researcher was employed by a for-profit university during data collection, and this reality had the potential to bias the study. However, potential bias was mitigated significantly by the quantitative nature of the study. The data gathered was analyzed using rigorous, well-tested, and widely used statistical techniques. The nature of the analysis was objective not subjective. This method should minimize possible bias introduced by the researcher.

The instrument used to gather academic motivation data may be another limitation of the study. The AMS has been used with a variety of student populations in K-12 environments (Lavender, 2005; Ochoa, 2012), public and private colleges and universities (Frazier, 2009; Richardson, 2011), and with college students in a variety of international postsecondary institutions (Areepattamannil, Freeman, & Klinger, 2011; Barkoukis, Tsorbatzoudis, Grouios, & Sideridis, 2008). However, the AMS has not been used with for-profit college students. Using the AMS with this population may present unforeseen limitations.

The sample size needed to test for statistically significant results may be a limitation. A larger random sample was not possible with the host site. The university studied limited sample selection to a convenience sample at four of their local campuses. Subjects were surveyed using an online survey tool. Low response rates, particularly among the target populations, may limit the type of analysis possible. The sampling method and low response rates ($N = 44$) limits the generalizability of the results.

FPCU tend to avoid engaging in outside research. Gaining access to study site's national student population was not possible. Access was granted at four local face-to-face classes. No online students are included in the sample.

Assumptions

It was assumed that the AMS and personal data questionnaire was universally understood and that all subjects completed the instruments candidly and accurately. Students attending FPCUs tend to have experience at previous institutions (Chung, 2012). Previous college credits may have transferred with the subjects to their current university. The study does not distinguish among transfer students, grade levels such as freshman, sophomore, junior, and senior that are determined by cumulative credit hours earned. For this study, it was assumed that grade level was not related to academic motivation.

Study Significance

This exploratory study is designed to advance understanding of the academic motivation of degree-seeking students attending an FPCU in the United States. The results may help researchers, policy makers, administrators, students, and faculty gain useful insight into the academic motivations of this important student population. The results may inform institutional assessment efforts to improve student academic performance or to achieve other student oriented institutional goals.

Definition of Terms

Amotivation: is “the absence of intrinsic or extrinsic motivation” (Vallerand et al., 1992, p. 206).

Attendance: Students are considered to be in attendance if they have signed an attendance sheet within two weeks from the time the random sample is selected.

Attendance sheet: FPCU students are required to sign an attendance sheet verifying their presence in their appointed class. Financial aid eligibility is dependent upon students attending class for at least four of the five scheduled class periods.

Convenience sample: A convenience sample is where “respondents are chosen based on their convenience and availability” (Creswell, 2013, p. 157).

Extrinsic Motivation External Regulation: is where “behavior is regulated through external means such as rewards and constraints” (Vallerand et al., 1992, p. 1006).

Extrinsic Motivation Identification: is where “behavior becomes valued and judged important for the individual, and especially that it is perceived as chosen by oneself, then the internalization of extrinsic motives becomes regulated through *identification*” (Vallerand et al., 1992, p. 1007, emphasis in original)

Extrinsic Motivation Introjected: is where “the individual begins to internalize the reasons for his or her actions. However, this form of internalization, while internal to the person, is not truly self-determined since it is limited to the internalization of past external contingencies” (Vallerand et al., 1992, p. 1006).

Face-to-face class: A face-to-face class at and FPCU is where students physically attend a regularly scheduled class and sign an attendance sheet.

For-profit college or university (FPCU): A collegiate level degree granting postsecondary institution that is structured as a profit making enterprise.

Grade Point Average: The average of grade points on a 4.0 scale.

Intrinsic Motivation To Accomplish: is where “the fact of engaging in an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something” (Vallerand et al., 1992, p. 1005)

Intrinsic Motivation To Experience: occurs “when someone engages in an activity in order to experience stimulating sensations (e.g., sensory pleasure, aesthetic experiences, as well as fun and excitement) derived from one’s engagement in the activity” (Vallerand et al., 1992, p. 1006).

Intrinsic Motivation To Know: is where “the fact of performing an activity for the pleasure and satisfaction that one experiences while learning, exploring, or trying to understand something new” (Vallerand et al., 1992, p. 1005)

Organization

The remainder of the study is organized into four chapters. Chapter Two is a literature review. Chapter Three discusses the method used. Chapter Four discusses results and Chapter Five provides a discussion of the results and their implications for further study.

CHAPTER 2: LITERATURE REVIEW

Introduction

This chapter contains an analysis of current research investigating for-profit colleges and universities and the theoretical framework used in the study. The chapter also discusses development of the psychometric instrument used to measure academic motivation, the Academic Motivation Scale (AMS)(Vallerand et al., 1993; Vallerand et al., 1992), studies investigating the validity of the AMS, studies using the AMS, and studies that use the AMS to investigate topics. Those topics include the relationship between academic motivation and grade point averages, the relationship of academic motivation with regard to race and ethnicity, the academic motivation of community college students, and the academic motivation of students enrolled in professional programs.

The literature review also contains studies related to the foci of the research and related to answering the three research questions. First, what are the academic motivations of degree-seeking undergraduate students attending for-profit colleges and universities? Second, what differences, if any, exist among the academic motivation of degree-seeking undergraduate students at for-profit colleges and universities by age? Third, what value, if any, does academic motivation have for predicting grade point averages for degree-seeking undergraduate students attending for-profit colleges and universities? For-profit higher education has a long history in the United States. The next section contains an overview of current research and issues facing for-profit higher

education in the U.S.

Overview of For-profit Colleges and Universities

The for-profit sector of higher education has historical origins as early as the 1600s (Kinser, 2006a). For-profit postsecondary education providers have existed continuously in the United States (U.S.) since before the nation was founded.

There is nothing new about for-profit higher education in America. Proprietary education first appeared in the 1600s about the same time that institutions like Harvard were being created. For much of U.S. history these schools provided popular mass education in contrast to traditional colleges that were often reserved for the elites. (Beaver, 2009, p. 55)

Prior to the proliferation of baccalaureate degree granting institutions in the later half of the twentieth century, for-profit postsecondary education took the form of "career colleges" and other proprietary institutions that mostly offered short courses in applied fields and served local labor markets (D. Deming et al., 2013, p. 138). "Generally speaking, the major purpose of these schools besides profitability was to provide practical and narrowly focused training, filling a niche that was not addressed by non-profit public or private higher education" (Beaver, 2009, p. 55). This reality changed in the final three decades of the twentieth century when proprietary postsecondary institutions such as University of Phoenix, Capella University, Walden University, and Grand Canyon University were formed, or transformed in the case of Grand Canyon University, offering college degrees in direct competition with public and private nonprofit colleges and universities.

Private nonprofit and public institutions are considered by some to be operating

for the public good (Bok, 2013). Publicly supported college and universities are funded via tax dollars, grants, donations, and tuition. Private nonprofit postsecondary institutions receive funding from many of the same sources that publics do. They are corporations organized as charities allowing them to accept tax-deductible donations (Kinser, 2006a). In contrast, for-profit “institutions are private, but they do not have the eleemosynary heritage of traditional nonprofit higher education” (Kinser, 2006a, pp. 1-2). By definition, they are organized as profit-seeking corporations that grant collegiate level degrees similar to those offered by public and private nonprofit corporations.

Private for-profit education corporations pay taxes to numerous taxing authorities at the local, state, and federal levels. In addition to meeting the financial reporting requirements of local, state, and federal taxing authorities, those for-profit education companies that are publicly traded must meet quarterly filing requirements with the Securities and Exchange Commission. Like other for-profit corporations, some pay dividends to shareholders and have few restrictions on how profits, or other funds generated from operations, may be used.

For-profit institutions, then, are distinguished from their not-for-profit peers not by their ability to make money on organizational activities but by what they are able to do with that money. Not-for-profit institutions can make money too—many, in fact, make a lot of money—but they can use excess revenue only to develop the organization and continue its charitable or other nonprofit objectives. In contrast, for-profit institutions can essentially do whatever they want with their money, including offering additional reward to their owners, dividends to stockholders, and reinvestment in completely unrelated activities. (Kinser, 2006a, p. 8)

While much of the focus on for-profit higher education is directed to the larger institutions, the size and scope varies widely among them. “For-profit sector institutions

are a varied group. The sector contains the largest schools by enrollment in the United States and also some of the smallest” (D. Deming et al., 2013, p. 138). The for-profit sector is heterogeneous ranging from relatively small schools with low profitability and relatively large institutions making hundreds of millions of dollars annually.

For-profit colleges and universities (FPCUs) may use profits to expand their organizations. Expansion efforts at FPCUs may take the form of opening new locations within existing markets, expanding into new markets, advertising efforts designed to increase local and online enrollment, or the acquisition of other organizations aligned with their educational mission.

The educational mission of Capella University is,

[T]o extend access to high quality bachelor's, master's, doctoral, and certificate programs for adults who seek to maximize their personal and professional potential. This mission is fulfilled through innovative programs that are responsive to the needs of adult learners and involve active, engaging, challenging, and relevant learning experiences offered in a variety of delivery modes. (Capella University, 2014)

Like other FPCUs, Capella University offers courses in face-to-face classes and online. Online education helped fuel growth in sector. “The corporate expansion became linked with two simultaneous occurrences: the rise of degree granting for-profit higher education and the evolution of Internet-based distance education” (Kinser, 2006a, p. 5). The change in technology during the 1980s and 1990s also fueled the growth of for-profit higher education that expanded access to higher education.

FPCUs directed their admissions efforts to a previously under-served group of students: working adults who need to complete their undergraduate or graduate

educations. FPCUs “stepped into a void not filled by traditional higher education, an industry that is to some degree unwilling to meet this increasing demand for higher education” (McGuire, 2012, p. 131). Many of the students attending FPCUs are working adults.

Working adults need services that differ from traditional public and private nonprofit colleges and universities. “Students at for-profit institutions seek a specific educational experience, tailored toward career advancement, and have little desire for all the trappings of a traditional undergraduate education” (McGuire, 2012, p. 131). FPCUs found success by delivering popular degree programs and eliminating services working adults view as extraneous. “During the 1980s alone, it is estimated that for-profits accounted for one-half the increase in higher education’s total enrollment.” (Beaver, 2009, pp. 56-57). The size and scale of FPCUs ranged from ones that were quite small to some of the largest universities by enrollment.

The majority of the growth occurred within publicly traded education corporations. “The proportion of for-profit institutions offering degrees increased quickly after 1995, with major publicly owned institutions like DeVry, ITT Tech, and the University of Phoenix prominently represented in the expansion” (Kinser, 2006a, p. 5). Although publicly traded FPCUs may raise money for expansion through selling stock, the majority of their operating funds come from tuition. “For instance, at for-profits, 95 percent of revenues come from tuition. At non-profit private schools, 42 percent of revenues are tuition generated and at public non-profits the figure is 18 percent” (Beaver, 2009, p. 59). The largest and, arguably, the most successful of the FPCUs is University of

Phoenix.

LARGEST FOR-PROFIT UNIVERSITY

Numerous articles, studies, and dissertations have been written investigating various aspects of academic operations and business practices at University of Phoenix (Bugay, 2000; DeFusco, 1999; Embree, 2001; Goodwin, 1993; M. D. Hughes, 2006; Kinser, 2006b; Rutherford, 2002). This section contains a brief discussion of studies investigating the largest and, arguably, the most successful of FPCUs. While there are several relatively large FPCUs, University of Phoenix is the largest by enrollment (Bok, 2013), granted the largest number of baccalaureate degrees in 2012 (The Chronicle of Higher Education, 2013), and is the institution that is most often discussed regarding for-profit higher education.

University of Phoenix (UOPX) was established in 1976 by Dr. John Sperling (Apollo Group, 2012). At the time, he was a tenured professor at San Jose State University (Ruch, 2003). He identified the existence of an underserved market for higher education. The students he sought to serve were working adults who needed to earn, or complete, a college degree but had no convenient means of doing so (Rutherford, 2002). Dr. Sperling created an institution that offered education at a time and place that was convenient for the student (Embree, 2001).

UOPX's student-centric focus and the early adoption of online learning propelled it into the largest for-profit degree granting university in the United States (The Chronicle of Higher Education, 2013). The studies discussed in this section explore areas of for-profit education with regard to UOPX's business model (Bugay, 2000); student

perceptions of the university (DeFusco, 1999); student perceptions of online education (Goodwin, 1993); and the growth of online learning (Bell & Federman, 2013); a case study investigating the relationship between UOPX's operational philosophy and actual practices (Embree, 2001); and the economics of for-profit higher education (Rutherford, 2002).

Business Model

Bugay's (2000) study investigated "specific characteristics of the University of Phoenix corporate model that can be applied to the community college environment" (Bugay, 2000, p. 19). In doing so, Bugay (2000) explains much of the student experience at UOPX. The exploratory case study design engaged students via a survey and UOPX leadership via face-to-face interviews and, in the case of Dr. Sperling, UOPX's founder, a questions and answer session conducted via facsimile.

These included critical personnel such as the founder, the chief academic officer, the chief finance officer, the chief research associate, and local leaders at the Michigan Campus. Among those interviewed: 1. John Sperling, Ph.D.: Founder of the University of Phoenix, 2. Ms. Laura Palmer Noon, JD: Provost and Vice President of Academics of the University of Phoenix and a fellow graduate student of the Union Institute, 3. Mr. Larry Fleisher, Vice President of Finance, 4. Ms. Serra Sarah: Michigan Director of Corporate Development, 5. Mr. Kurt Slobodzian: Associate Vice President for Research, 6. Mr. Michael Wright: Regional academic coordinator. (Bugay, 2000, p. 116)

The study provided operational details of UOPX and insight into UOPX's student population.

UOPX offers undergraduate classes in a five-week format for students attending online and locally. Online students must participate in discussion forums on four of the seven days in each week by posting at least two short substantive discussion essays

(Bugay, 2000). Participation points are earned by responding to the faculty member's discussion questions and by substantively responding to other student's posts. Students attending locally go to class face-to-face one day per week for four hours. In both modalities student take only one class at a time.

UOPX's accelerated schedule allows students to complete up to 30 semester credit hours in one year. In contrast to a traditional academic calendar with breaks between and within semesters, UOPX holds classes year-round with small breaks for Thanksgiving and at year's end. Classes are not held on federal holidays within the year, such as Dr. Martin Luther King, Jr. Day, Memorial Day, the Fourth of July, and Labor Day. The majority of students attending UOPX are working adults whose work schedules do not follow the traditional university semester course calendar.

UOPX students do not participate in extracurricular activities such as sports programs. "The University of Phoenix offers few if any opportunities for student social gatherings other than study groups/learning team and graduation" (Bugay, 2000, p. 190). Part of the UOPX's learning model includes the use of learning teams in many classes. Learning teams are required to meet outside of class time to complete projects and assignments which also count toward educational contact hours. FPCU students typically have jobs, families, and other commitments outside of school. They have social structures in place and thus have little need for school sponsored extracurricular activities.

Over ten-percent of the students surveyed by Bugay's (2000) study had no experience with traditional higher education. "It is possible they may have never attended

a college or university unless they could attend an accelerated program” (Bugay, 2000, p. 191). Approximately 90% of UOPX students may have prior collegiate level experience. Student may be attending to finish their education.

Some students at UOPX are seeking degrees to obtain better jobs. “The statistical evidence is that students want to use their degree to obtain good jobs. These working adults are interested in advancing themselves which is a major motivation for attending school” (Bugay, 2000, p. 192). Students have a transactional attitude toward completing their degree. They are not engaging in education for education’s sake but for the reward of possible career advancement upon completion.

Distance and Online Education

FPCUs are pioneers in online and distance education (D. Deming et al., 2013; Morey, 2001; Rutherford, 2002; Winston, 1999). As an early adopter (Christensen, Horn, & Johnson, 2010) UOPX lead the way as faculty and students moved online. Goodwin’s (1993) study investigated the faculty and student perceptions of online learning’s comparability to traditional face-to-face delivery methods at UOPX. It also examined potential factors limiting the success of online learning. Currently, online learning is delivered in a variety of formats including online video from providers like Khan Academy, in massive online open courses, or MOOCs, and via other web applications executed on computers, electronic tablets, and smart phones. The earliest online classes did not have the benefit of today’s relatively more sophisticated technology.

The first online classes were deployed prior to the development of web browsers.

Courses were offered using online bulletin boards. Goodwin's study was conducted prior to the development of web browsers.

The sample consisted of 50 faculty and 428 students using the online learning system (Goodwin, 1993). The results indicated that over 95% of students and 99% of faculty would recommend the online program to others (Goodwin, 1993, p. 95). Not surprisingly, "those students who did not miss the face-to-face interaction of the traditional classroom gave the program significantly higher rating than those who did miss the face-to-face interactions" (Goodwin, 1993, p. 97). The efficacy of an online learning modality was also investigated by the study.

Faculty and students were surveyed regarding their perceptions of the online program's effectiveness. "Ninety-seven percent of the students and 85% of the faculty report that they believe the program is an effective one" (Goodwin, 1993, p. 97). This portion of the study is akin to a satisfaction survey where subjects rate their experiences.

Online learning methods and modalities that were pioneered by FPCUs have been implemented by public and private nonprofit institutions such as Arizona State University (Thomason, 2015). For example, e-learning in postsecondary education has grown to the point that, in the fall of 2010, approximately 31 percent of "all college students took at least one online course" (Bell & Federman, 2013, p. 165). E-learning has expanded beyond FPCUs and into traditional college and universities.

Among the most active participants in the college e-learning market are large state systems such as the University of Maryland University College (UMUC), Pennsylvania State University, and the University of Massachusetts (UMassOnLine). In 2011, more than 70,000 students worldwide enrolled in at least one online UMUC course and the university had more than 230,000

enrollments in online only courses. (Bell & Federman, 2013, p. 168)

The growth of e-learning, or online learning, implies several outcomes for institutions offering such courses. “The primary reasons for the growth of e-learning in the nation's colleges and universities include the desire of those institutions to generate new revenue streams, improve access, and offer students greater scheduling flexibility” (Bell & Federman, 2013, p. 165). These three reasons are the same for many FPCUs: increase revenue, improve access to postsecondary education, and offer education at a time and place that is convenient for the students. Colleges and universities that were once skeptical of online learning are offering online courses along side their face-to-face classes (Bell & Federman, 2013). Some consider the adoption of online learning modalities as an institutional endorsement of the methods and the learning outcomes that follow.

Governance and Academic Freedom

Embree’s (2001) case study of UOPX investigated the academic governance structure and compared it to traditional public and nonprofit colleges and universities. Embree discovered a governance structure at UOPX where the “for-profit ethos is at odds with the traditional non-profit colleges and universities and that the administrative structures required for profitability run counter to the traditional forms of governance found in traditional colleges and universities” (Embree, 2001, p. 85). The governance structure at UOPX appears more like a business hierarchy than a university comprised of colleges and schools.

UOPX faculty had concerns about how the academic governance structure could

adversely affect the University's commitment to academic freedom (Embree, 2001).

“[T]he essential threat that many faculty feel about for-profit universities and colleges is that academic freedom and tenure will be undermined, if not eliminated” (Embree, 2001, p. 86). The current definition of academic freedom at UOPX resides in the *2014-2015*

Faculty Handbook. It states,

University of Phoenix publicly states its commitment to academic freedom for the faculty, employees, and students. Academic freedom is the right of faculty, employees, and students to examine, question, teach, learn, investigate, speculate, comment, and criticize without deference to prescribed doctrines. The University acts in accordance with this commitment in both policy and procedure. All members of the University community are free to share their ideas with fellow members. The University encourages good judgment and appropriate restraint in the expression of one's ideas and the demonstration of respect for the opinions of others. (University of Phoenix, 2014a, p. 73)

While the first portion of UOPX's statement on academic freedom shows strong support for academic freedom, the last sentence may undermine faculty's confidence in their ability to exercise that freedom without fear of repercussions. Tenure is not offered at UOPX, nor any other FPCU, and without the protection of tenure, regardless of a university's commitment to academic freedom, faculty risk being fired for what they teach in class (Embree, 2001).

Faculty concerns may be exacerbated by the how UOPX schedules classes and faculty. UOPX faculty are offered courses on an as-needed basis. UOPX does not have traditional semester calendars. They build academic calendars based upon cohorts of enrollment (Embree, 2001). More cohort starts mean more course offerings for adjuncts, but course offerings are not guaranteed to any faculty member (University of Phoenix, 2014a).

Mission

Rutherford's (2002) case study investigated the relationship among academics, economics, and UOPX's execution of their mission. The study revealed a strong commitment to the company's mission among faculty, staff, and administration. UOPX's mission states, "University of Phoenix provides access to higher education opportunities that enable students to develop knowledge and skills necessary to achieve their professional goals, improve the productivity of their organizations and provide leadership and service to their communities" (University of Phoenix, 2014b). Rutherford found that,

UOP has a very clear sense of mission—to serve the educational needs of the working adult. This is best defined as a core value because it is so internalized and visceral. In turn, this is combined with the goal of market success—primarily profit and growth, as the mechanism to reach more working adults. (Rutherford, 2002, pp. 158-159)

UOPX is a mission driven organization with a clear sense of purpose. The organization knows who they serve and why they serve them (Rutherford, 2002). This conclusion is supported by other studies that state "For-profits continue to take pride in the fact that they provide an avenue for lower income students to obtain job training, and more recently, college degrees that will allow them to enjoy the benefits that ensue" (Beaver, 2009, p. 64). A narrow focus on degree programs that have strong connections to employers benefits students who earn a potentially more marketable degree. Highly focused programs benefit UOPX by expanding enrollment that drives increased revenue and profitability (Rutherford, 2002). Organizational commitment to the university's mission may translate to student perceptions that UOPX provides a quality education or being a legitimate higher education provider.

Legitimacy

Hughes (2006) study explored how UOPX may have gained legitimacy as perceived by their primary audience. Hughes defined legitimation “as the cognitive comprehension of an organization by a key audience” (M. D. Hughes, 2006, p. 19). The case study investigated how “three key audiences in an organizational field—communities of practice, critics, and gatekeepers—may legitimate an organization”(M. D. Hughes, 2006, p. 19). Hughes’ dissertation examined each of these areas in a case study design devoting one chapter to each area.

UOPX’s participation in communities of practice was distilled into explanations of how UOPX’s degree programs meet the academic criterion worthy of a college degree. In some cases, UOPX needed to educate the higher education community about their learning models (M. D. Hughes, 2006). Education meant helping regulators, accreditors, and fellow institutions understand UOPX’s accelerated course schedules, distance education, and their reliance on adjunct faculty.

UOPX’s tactics for dealing with critics was similar to methods employed in other industries. Marketing communication and public relations teams were engaged to manage the University’s public image (M. D. Hughes, 2006). Hughes outlined these tactics indicating times when UOPX would engage their critics to correct a possible misperception, or, when not to engage. Critics could be members of the press, policy makers, or those from within higher education.

Regulatory gatekeepers have the ability to exercise some form of existential power over an organization through the granting, or denial, of operating licenses, or in

the case of regional accreditors, direct influence over UOPX's ability to process federal Title IV funding (M. D. Hughes, 2006). There are "three gatekeeping audiences in the University of Phoenix's institutional environment: regional accreditors, state regulators, and the federal government" (M. D. Hughes, 2006, p. 288). While the relationship with state regulators is important, UOPX's relationship with the Department of Education and their regional accreditor, the North Central Association's Higher Learning Commission, are what allows UOPX to process Pell Grants and federally subsidized student loans (M. D. Hughes, 2006). As with most institutions of higher learning, losing the ability to process Title IV funding could lead to the demise of the institution.

Based in Santa Ana, California, FPCU Corinthian College was shuttered by the loss of Title IV funding eligibility (Blumenstyk, Fabris, & Field, 2015). Corinthian was fined \$30 million by the Department of Education for providing misleading job placement statistics and their eligibility to process federal funds, such as Pell Grants and student loans, was terminated (Thomason & Blumenstyk, 2015). Corinthian's subsidiaries "Everest College, Everest Institute, Heald College, and WyoTech would close because the parent company had failed to find a buyer for them" (Blumenstyk et al., 2015). Corinthian failed to find a buyer for its California operations because the state's Attorney General would not indemnify potential buyers from current and future law suits brought by the State (Brickley, 2015).

UOPX's strategy of legitimation was to engage each regulator in a manner that signaled the University's long-term commitment to their students and to making a positive contribution to the higher education landscape. Regarding state regulators,

UOPX's legitimation strategy was to enter states which were perceived to be more friendly to UOPX's education model and to delay, or avoid, entry into states that were perceived to be hostile toward for-profit education (M. D. Hughes, 2006).

Summary

This section discussed some of the issues in higher education that are brought to light by the existence and the success of UOPX. UOPX is the largest provider of higher education in the U.S. by enrollment and by the number of baccalaureate degrees granted (Snyder & Dillow, 2012). As more institutions of higher education move toward offering online degree programs (Thomason, 2015), UOPX's success at serving students who use federal financial aid to fund their education continues to keep UOPX in the press (Bok, 2013).

GRANTS AND THE G.I. BILL

Although FPCUs had about 10 percent of the degree seeking student population, they consume upwards of 24 percent of all Pell Grant awards (Bok, 2013). FPCUs also have marketing efforts which target current and former Department of Defense personnel. Cellini (2010) investigated relationships among Pell Grants, the state sponsored Cal Grant, and the Serviceman's Readjustment Act of 1944 (GI Bill) and entry into FPCUs, community colleges, and other California colleges.

Using panel data methods and a new administrative data set of for-profit colleges operating in California between 1989 and 2003, I assess the impact of the federal Pell Grant program, the G.I. Bill, and California's Cal Grant program on the net number of for-profit colleges per county. (Cellini, 2010, p. 527)

Using county data allows researchers to differentiate student's socioeconomic

status with a higher degree of accuracy. County income data is more detailed than similar data aggregated at the state level. The results of Cellini's analysis points to the importance grants have on entry into FPCUs.

The results suggest that for both Pell and Cal Grants, an increase in the per-student maximum award does indeed encourage for-profit entry. This relationship is particularly strong in counties with high adult poverty levels, where more students are eligible for aid. Further, these gains in the private sector do not appear to come at the expense of the public sector. Rather, public community colleges also experience enrollment gains as the generosity of Pell and Cal Grants increases, although this reaction appears to be weaker than the reaction of for-profits. (Cellini, 2010, p. 527)

One of the concerns regarding FPCU's success at attracting low socioeconomic students is that those students were being recruited away from lower cost community colleges toward higher cost for-profits. Increased grant dollars benefited FPCUs more than community colleges.

Cellini (2010) assumed that student engaged in rational behavior when deciding which school to attend. The study stipulated that "students determine which option to pursue by comparing the net present value (denoted NPV) of each alternative" (Cellini, 2010, p. 534). While this method is advantageous for researchers, questions remain about how financially sophisticated higher education consumers are when choosing a college, and if they engage in NPV calculations when choosing among schools.

Comparing the different grant aid programs, the effect of the changing public-private price differential should be most apparent for the Cal Grant A. Under this program, community college students receive just \$690, compared to a maximum of \$9,708 at a for-profit—more than a \$9,000 difference. However, the grant is also targeted toward the highest-achieving students, and these students are less likely to consider two-year college options in the first place, potentially mitigating the effect. (Cellini, 2010, p. 536)

This indicates that access to grants increases access to higher education at public, private nonprofit, and FPCUs. Those students eligible for funding under the G.I. Bill experienced less variance in their school choice.

The G.I. Bill is more egalitarian than the other grants because it treats all recipients the same. Funding provided by the G.I. Bill is done without regard to military rank or the recipients' socioeconomic status. "The G.I. Bill treats all education providers equally and is therefore least likely to have a differential impact on the two sectors" (Cellini, 2010, p. 536). Although the G.I. Bill is an important source of funding for students and institutions, it does not affect entry into FPCUs. The "results suggest that, for all but the G.I. Bill, grant aid programs encourage entry among for-profit colleges" (Cellini, 2010, p. 547). Grants are more effective at encouraging college entry than the G.I. Bill.

FPCUs have also had success targeting active duty and retired military students. Some on active duty and retired members of the U.S. armed forces are eligible for educational benefits under various provisions of the G.I. Bill. FPCUs such as Strayer University and UOPX have active marketing campaigns targeting those eligible for G.I. Bill benefits (McGuire, 2012). These benefits help FPCUs in three ways.

First, the benefits provide a steady stream of new students who might benefit from a college education. Second, military students typically have funding in place for their education through their eligibility for G.I. Bill benefits. Third, it helps for-profits comply with the 90/10 rule. "The 90/10 rule requires that a school receive at least 10 percent of its revenue from non-Title IV sources." (McGuire, 2012, p. 127). Although G.I. Bill

benefits come from a federal source, they are not considered to part of Title IV funding and that helps lower the amount of funding counted toward the 90 percent.

COLLEGE COSTS

A study using data from the Integrated Postsecondary Education Data System (IPEDS) compared the cost of attending public, not-for-profit, and for-profit colleges for the 1996 reporting year (Laband & Lentz, 2004). The study used data from 1,450 publics, 1,316 private not-for-profits, and 176 FPCUs (Laband & Lentz, 2004). This quantitative study used the ordinary least squares regression technique to compare the cost function of each type of institution. “Our finding of no statistically significant difference in the cost structure of production between private, for-profit IHEs and private, not-for-profit IHEs is really quite striking” (Laband & Lentz, 2004, p. 438). The absence of differences between nonprofits and FPCUs may be a function of deficiencies in the IPEDS data. “Because all undergraduate students are treated identically in the IPEDS data, we cannot distinguish the fact that the two types of institutions produce markedly different undergraduate outputs” (Laband & Lentz, 2004, p. 438). FPCUs and nonprofits may be spending similar amount of money, but they could be spending it in different ways.

Publics, private not-for-profits, and FPCUs seek to expand and improve their institutions via their expenditures. Success measures at public and private not-for-profit colleges are typically not measured by increasing enrollment, or increasing market share, as it is in FPCUs. Spending at FPCUs may take the form of increased marketing expenditures where publics and private not-for-profits may spend a similar amount on student services.

The possibility that the standard assumptions about the behavior of administrative personnel in both private, for-profit and private, not-for-profit [Institutions of Higher Education] may not hold as strongly in an academic setting as in other markets. It may be, for example, that the senior management of for-profit institutions does not, in fact, seek to maximize profits; there may be alternative managerial goals such as maximization of student enrollment (market share) or average quality of students enrolled, subject to a minimum profit constraint. (Laband & Lentz, 2004, p. 439)

Although FPCUs may appear to be driven only by profits, that assumption might not be true for institutions that are more mission driven. It can be argued that profit is an outcome of a successfully run FPCU that delivers on its educational mission.

FPCUs rely on tuition to fund their operation. Tuition dollars are generally paid by student loans which individuals acquire to attend. Some authors argue that FPCU's reliance on funding from student loan debt is suspect and patently unfair to students. For some researchers, access to higher education is concomitant with an unacceptably high student loan debt.

Student Loan Defaults

Student loan default rates, which is the percentage of students defaulting on their student loan obligations, concern many higher education professionals. McGuire (2012) argues the problem is particularly acute for students attending for-profits.

The fact that Title IV need-based aid has proved so lucrative illuminates why the student populations at for-profit institutions differ from those at nonprofit institutions. Students whom traditional institutions consider to be unqualified for admission are, for the most part, still eligible to borrow money to pay for an education at a for-profit institution. (McGuire, 2012, p. 140)

FPCUs are open enrollment institutions. Students need to have a high school diploma or a GED to gain admission. Typically, students applying to FPCUs are not

assessed for scholastic aptitude as part of the admission's process. FPCUs students are also more likely to finance their education through subsidized and unsubsidized federal student loans. Higher debt loads may lead to higher default rates.

Students who attend for-profit schools are also more likely to default on loans than their nonprofit counterparts. The Department of Education estimates that students in two- and four-year programs at for-profit institutions are three times as likely to default over the lifetime of their federal Stafford loans compared to student borrowers as a whole. (McGuire, 2012, p. 138)

FPCUs fund increased access to higher education largely through the borrowing of its students to pay tuition.

COLLEGE SELECTION

Students apply to colleges and universities based upon a variety of criteria that include price, selectivity, reputation, location, and the availability of financial aid. For students selecting FPCUs, price is not an important factor for students choosing accelerated college programs. Bugay (2000) found “evidence that cost, even cost up to 250% above the national norm for four-year institutions and up to 500% above the national norm for two-year institutions, is not a significant factor in choosing the University of Phoenix accelerated program” (p. 189). For working adults, the course schedules at public and private nonprofit colleges and universities can be barriers to application for admission. Working adults may not be able to find alternative employment options that allow them to maintain their incomes and attend classes. FPCUs solve that problem by offering classes online and at times and locations where working adults can keep full-time jobs and attend college.

Financing a college education concerns many students as they choose which

school to attend. Chung's (2012) quantitative study investigated the role of student socioeconomic status and how that may affect school choice. The study used data from the National Educational Longitudinal Study of 1988 and from the Postsecondary Education Transcript Study using the 2000 data set (NELS:88/2000). The data were analyzed using a multinomial logit model. For those students attending proprietary institutions, the data set did not distinguish among students attending proprietary trade schools and those attending institutions that offered college degrees. The study found that,

[F]amily resources play an important role in a student's choice decision. In fact, the obtained average effects on family income display a remarkably clear income progression: students from low-income (under \$25K) families sorting into for-profit schools; students from lower middle-income (\$25K to under \$35K) choosing community colleges; and students from the middle-to-high incomes (higher than \$50K) enrolling into non-profit 4-year colleges. (Chung, 2012, p. 1096)

The lowest income students did not choose the lowest cost college. Other factors may be driving those choices. Students choosing to attend community colleges may be doing so to earn a professional certificate and/or a two-year degree.

The study found that "unsurprisingly, gender is a significant factor for the choice of proprietary college: there are disproportionately more women in the for-profit educational sector" (Chung, 2012, p. 1090). The data also revealed that "the majority of for-profit female students concentrate in low-paying vocations, such as health professions, personal and culinary services, and business support – the professions, for which proprietary schools often train students" (Chung, 2012, p. 1092). Degree-granting institutions and vocational schools have separate goals yet are incorrectly, some argue,

aggregated into the “proprietary” category. Earning a skills certificate in business support is significantly different than earning an associates or baccalaureate degree in business.

Chung (2012) also tested to determine if race was a significant factor in choosing among colleges and vocational programs. The study revealed a disproportionate amount of non-Asian minority students were attending propriety schools. However, the analysis indicated race was not a factor in determining school choice. “Despite a high ratio of non-Asian minority students in proprietary schools (30.7% compared to 18.5% in 4-year non-selective non-profit colleges), race is not a significant factor in the choice of for-profit college” (Chung, 2012). Socioeconomic status is a more important factor in determining college choice than is race.

Chung (2012) also estimated the probability of how school choice might change with regard to relative changes in tuition prices. The study revealed that “an increase in community college tuition from \$1000 to \$1400 increases the average predicted probability of attending a for-profit college by 1%” (Chung, 2012, p. 1098). Although this appears to be an estimation for the cross-price elasticity of demand, it is not. The logit model used in this study estimated the probability of choosing one school over another based upon a variety of criteria, one of which was tuition price. Chung’s (2012) result indicated that proprietary for-profit providers offered access to higher education for non-Asian minorities. Some argue that growth in the FPCU sector has been driven by providing minorities access to higher education.

MINORITY ACCESS

Providing access to higher education for students of color has driven some of the

growth in the for-profit sector.

As one traces the historical roots of private, for-profit education in America, it becomes clear that such institutions sometimes played a particularly important role in opening up education to women, people of color, Native Americans, and those with disabilities, especially blind and deaf people. (Ruch, 2003, p. 57)

FPCUs are successfully recruiting African American students. “Black students are among those who are increasingly opting for a postsecondary education at for-profit colleges” (Iloh & Toldson, 2013, p. 207). Historically Black colleges and universities (HBCUs) no longer enroll the highest aggregate number of Black students.

Technology, costs, demographic shifts, and emerging occupational requirements are creating fundamental changes in the higher education landscape for Black students. In 2001, four HBCUs were among the top 10 for enrolling Black students. In 2011, no HBCUs were in the top 10, and only one (Florida A&M University) was in the top 20. The top 10 colleges for enrolling Black students consist of three for-profit colleges, four community colleges and three public four-year institutions. (Iloh & Toldson, 2013, p. 209)

The shift toward FPCUs occurred within the relatively short time span of ten years. “As of 2011, the nation's top producer of Black baccalaureates was the University of Phoenix, the country's biggest for-profit college” (Iloh & Toldson, 2013, p. 207).

While the percentage of students at HBCUs who are African American continues to be high, the total number of African American students enrolled at FPCUs outpaces those at HBCUs.

The reasons for FPCU’s relative success at enrolling of African Americans is varied. Some argue that the operational model at FPCUs in general, and the ability to attend full-time while remaining employed in particular, are driving this shift.

For-profit colleges do not offer obvious financial advantages for Black students; however they offer flexibility to students who cannot afford to leave their jobs to

pursue higher education. For-profit colleges also have marketing prowess and effectively streamline the application process to ease some of the inconveniences of a traditional admissions process. (Iloh & Toldson, 2013, p. 209)

FPCUs attract African American students in numbers larger than any other sector in higher education.

SUMMARY

This section contained an overview of for-profit higher education and some of the successes and concerns associated with that sector. The largest of FPCUs, University of Phoenix (UOPX), was discussed, and, in some ways, is a proxy for the entire sector. While much has been written about the student experience in specialized schools, such as HBCUs and other public and private not-for-profit institutions of higher learning, little research exists exploring the student experience at FPCU in general, and even less about student academic motivation at FPCUs in particular. This study focuses on assessing and analyzing the academic motivation of students attending FPCUs.

The next section sections discuss a theoretical framework within which the academic motivation of students attending FPCUs can be assessed and analyzed. The instrument used to assess academic motivation, the Academic Motivation Scale (AMS), is rooted Deci and Ryan's (1985) Self-Determination Theory (SDT). The following section begins with an overview of SDT and concludes with a literature review of the AMS.

Theoretical Framework

Developed over the course a several years and disseminated through multiple

publications (Deci, 1980; Deci & Ryan, 1980, 1985b, 1987), Self-Determination Theory (SDT) created a construct within which researchers could evaluate human motivation.

“To be motivated means to be moved to do something. A person who feels no impetus or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated” (Ryan & Deci, 2000a, p. 54). Implicit within SDT is the notion that people are motivated by something to make choices. “[S]elf-determination is the capacity to choose and to have those choices, rather than reinforcement contingencies, drives, or any other forces or pressures, be the determinants of one’s actions” (Deci & Ryan, 1985b, p. 38). In a higher education context, SDT can help explain how students are motivated to engage in various academic activities. SDT posits three broad categories of motivation. They are intrinsic motivation, extrinsic motivation, and amotivation (Deci & Ryan, 2000).

Students who are oriented toward intrinsic motivation do so for the sheer pleasure or satisfaction from the undertaking itself (Deci et al., 1991). Intrinsic motivation refers to something internal that moves one to act. “Intrinsically motivated behaviors are engaged in for their own sake—for *the pleasure and satisfaction derived* from their performance” (Deci et al., 1991, p. 325, emphasis in original). Intrinsic motivation drives students to study and engage in academic activities for sheer pleasure or satisfaction gained from those activities (Ryan & Deci, 2000a). For example, a humanities student who is intrinsically motivated might say, “I enjoy reading Proust.” This is contrasted with extrinsic motivation that is undertaken in reaction to some external force, i.e. “I am required to read Proust in order to pass my course.”

Students who are oriented toward extrinsic motivation undertake activities as a means to an end to achieve some separable outcome (Deci et al., 1991; Ryan & Deci, 2000a). Extrinsic motivation is derived from something outside the individual that elicits action. Deci and Ryan (1985) indicate that extrinsic motivation are instrumental. “They are performed not out of interest but because they are believed *to be instrumental to some separable consequence*” (Deci et al., 1991, p. 325, emphasis in original). Extrinsic motivation is not caused directly by the outside force, or separable consequence, but it is catalyzed by them (Vallerand et al., 1992). “A student who does the work because she personally believes it is valuable for her chosen career is also extrinsically motivated because she too is doing it for its instrumental value rather than because she finds it interesting” (Ryan & Deci, 2000a, p. 58). For example, if that same humanities student reading Proust says, “I need to finish reading Proust so I can get a good grade on the exam,” this indicates the student is doing the reading to achieve the separable outcome of earning a good grade. Although the student chose to read Proust, which indicates some form of internalization, the reason driving the choice is external to the student.

The third category of motivation is amotivation, which is the absence of either intrinsic or extrinsic motivation. If that same humanities student said, “I don’t know why I’m reading Proust,” which is an example of amotivation. Amotivation stands alone while intrinsic and extrinsic motivation can be divided into subcategories.

SDT assumes that physical needs are satisfied *a priori*. This allows psychological needs, and the inherent choices required to satisfy those needs, to be fulfilled separately from physical needs (Deci et al., 1991). While Deci and Ryan’s (1985) “approach

focuses primarily on psychological needs—namely, the innate needs for competence, autonomy, and relatedness,” they also “recognize that basic need satisfaction accrues in part from engaging in interesting activities” (p.38). Those interesting activities could be playing sports, attending college, learning a foreign language, or any other activity a person might find interesting. “When self-determined, one acts out of choice rather than obligation, coercion, and those choices are based on an awareness of one’s organismic need” and it allows for “a flexible interpretation of external events” (Deci & Ryan, 1985b, p. 38). The context within which a person makes their choices also affects the nature of those choices.

There are many different contexts in which students make decisions. The type and size of institution a student attends, such as a public university, a private university, a Historically Black College or University (HBCU), a Hispanic Serving Institution, a Community College, Predominately White College or University (PWCU), or a for-profit university, each represent different contextual environments for students. For example, the contextual environment for students attending an HBCU or a PWCU may affect how students engage with their peers, the faculty, and university administration (Cokley, 2003). The social context a person encounters may affect their choices. Choices reflect, in some measure, intrinsic motivation.

Self-Determination Theory is specifically framed in terms of social and environmental factors that *facilitate* versus *undermine* intrinsic motivation. This language reflects the assumption that intrinsic motivation, being an inherent organismic propensity, is catalyzed (rather than *caused*) when individuals are in conditions that conduce toward its expression. (Deci & Ryan, 1985b, p. 38, emphasis in original)

Those conditions in higher education include institution size and type, as well as, the characteristics of those campuses, diversity—intellectual, racial, national origin, religious—or the lack of diversity in some cases, whether students attend online or traditionally face-to-face, and the type and quality of the learning environment and general social climate of the campus. Campus climate refers to something external to and separable from the student.

Separable outcomes may include earning a degree, earning money, pain avoidance, or some other form of an external reward.

For example, a student who does his homework only because he fears parental sanctions for not doing it is extrinsically motivated because he is doing the work in order to attain the separable outcome of avoiding sanctions. Similarly, a student who does the work because she personally believes it is valuable for her chosen career is also extrinsically motivated because she too is doing it for its instrumental value rather than because she finds it interesting. (Ryan & Deci, 2000a, p. 58)

The relationship between intrinsic and extrinsic motivation concerns educators in a variety of fields (Fortier, Vallerand, & Guay, 1995; Hidle, 2011; Kaminski, 1998; Keller, 2007; Ntoumanis, 2001; Ochoa, 2012; Pisarik, 2009; Sobral, 2004; Vallerand et al., 1992). The challenges educators face regarding student motivation are multifaceted.

Questions about an individual student, or a group of students categorized by factors such as age, gender, race, grade level, grade point average, socioeconomic status, or academic discipline have been investigated by numerous researchers (Adomnik, 2012; Ahn & Janke, 2011; Areepattamannil et al., 2011; Davis, 2009; Morreale, 2011; Odom-Harris, 2010; Richardson, 2011; Soon, 2011; K. M. Young, 2011). The research questions in this study are investigated by measuring the academic motivation of students

attending a for-profit university. The instrument used to do so is the Academic Motivation Scale (Vallerand et al., 1993; Vallerand et al., 1992).

The Academic Motivation Scale

The measurement instrument used in this study originated in French and was entitled “Echelle de Motivation en Education” (EME) (Vallerand, Blais, Briere, & Pelletier, 1989). “The preliminary and validation studies, which involved more than three thousand students, revealed that the EME has more than satisfactory psychometric properties” (Vallerand et al., 1993, p. 161). A subsequent study translated the EME into English and renamed the instrument to the Academic Motivation Scale (AMS) (Vallerand et al., 1992).

The translation was accomplished via a “parallel back-translation” method (Vallerand et al., 1992, p. 1009). The back-translation method uses two bilingual translators, in this case, to translate the French-Canadian language of the EME into English. The freshly translated English version was then translated back into French-Canadian where the translator had no knowledge of the original French-Canadian instrument (Vallerand et al., 1992). “To the extent that the original scale is appropriately retranslated, this method provided an initial assessment of the adequacy of the translated version of the scale” (Vallerand et al., 1992, p. 1009). This method was used in parallel where two sets of translators “two social psychologist and two graduate students in social psychology” (Vallerand et al., 1992, p. 1009) with detailed knowledge of “Deci and Ryan’s motivation theory conducted” both sets of translations (Vallerand et al., 1992, p.

1010). Those two translations were then reviewed by a committee of the translators and the EME's authors to compare both versions to ensure "the experimental version of the English AMS lists 28 items that may represent reasons why students go to college" (Vallerand et al., 1992, p. 1010). After a satisfactory English translation was developed, testing with students began.

The researchers conducted a pre-test "with 10 junior-college students in order to determine whether the AMS was clear and formulated in a language to which post-secondary studies students can relate" (Vallerand et al., 1992, p. 1010). The pre-test led to "minor modifications with the instructions" but not to the AMS itself (Vallerand et al., 1992, p. 1010). After a successful pre-test, the AMS was administered to a larger sample of students.

Students from Ontario were chosen randomly from a postsecondary institution in the province (Vallerand et al., 1992). A total of 745 students were randomly selected. The average age of those selected was 21.0 years with 484 females and 261 males (Vallerand et al., 1992, p. 1010). A second sample of "57 university students (27 males and 30 females) with a mean age of 19.3 years also completed the AMS twice over a one-month period" to assess the temporal stability of the instrument (Vallerand et al., 1992, p. 1010). The AMS measured intrinsic motivation, extrinsic motivation, and amotivation.

Each type of motivation was measured by a series of statements describing various aspects of that particular motivation (Vallerand et al., 1992). The AMS has 28 statements each with seven-point Likert scale (Vallerand et al., 1992). Each statement on the scale measures either, extrinsic, intrinsic, or amotivation. The extrinsic motivation

and intrinsic motivation scales were each separated into three subcategories (Vallerand et al., 1992).

Extrinsic motivation's three subscales are external regulation, introjected, and identification (Vallerand et al., 1992). Extrinsic motivation external regulation (EMER) is where "behavior is regulated through external means such as rewards and constraints" (Vallerand et al., 1992, p. 1006). An example of reward could be the grade earned on an assignment or for a course. A constraint might be fulfilling a prerequisite class prior to continuing in a degree program. Students choose to engage in the academic endeavor, which implies a form of internalization, but the reason for doing so is external to the student. Each of the three subcategories of extrinsic motivation all share some level of internalization. It appears the difference among them is the degree to which internalization occurs. It is less for EMER than it is for the remaining two categories.

Extrinsic motivation introjected (EMIN) is where "the individual begins to internalize the reasons for his or her actions. However, this form of internalization, while internal to the person, is not truly self-determined since it is limited to the internalization of past external contingencies" (Vallerand et al., 1992, p. 1006). Avoiding shame or undertaking academic activities to promote one's self-worth are examples of EMIN (Deci & Ryan, 2000). "Introjection represents a partial internalization in which regulations are in the person but have not really become part of the integrated set of motivations, cognitions, and affects that constitute the self" (Deci & Ryan, 2000, p. 236). EMIN is characterized by the partial internalization of the reasons for one's action making remain

largely external to the person. Extrinsic motivation that is more closely associated with one's identity is the third subcategory of extrinsic motivation.

Extrinsic motivation identification (EMID) is where “behavior becomes valued and judged important for the individual, and especially that it is perceived as chosen by oneself, then the internalization of extrinsic motives becomes regulated through *identification*” (Vallerand et al., 1992, p. 1007, emphasis in original).

For example, if people identified with the importance of exercising regularly for their own health and well-being, they would exercise more volitionally. The internalization would have been fuller than with introjection, and the behavior would have become more a part of their identity. (Deci & Ryan, 2000, p. 236)

Applied to a higher education context, EMID may drive students toward activities that lead to increased academic performance such as earning higher grades. Earning a higher grade is external to the student but the academic activities associated with earning that external reward would be done so more voluntarily (Deci & Ryan, 2000). Volition is a key element found in intrinsic motivation.

Intrinsically motivated activities are ones “that people do naturally and spontaneously when they feel free to follow their inner interests.” (Deci & Ryan, 2000, p. 234). Similar to measures for extrinsic motivation, the AMS divides the intrinsic motivation into smaller subsections. They are intrinsic motivation to know (IMTK), intrinsic motivation to accomplish (IMTA), and intrinsic motivation to experience (IMTE).

IMTK is where “the fact of performing an activity for the pleasure and satisfaction that one experiences while learning, exploring, or trying to understand

something new” (Vallerand et al., 1992, p. 1005). Consider a humanities student in a literature survey class who spends time reading an author’s biography that is not on the reading list required by the syllabus. This student may be doing the additional reading to learn more about the author. This is an example of IMTK because the student is doing additional work to know something, or to learn something that is not required or rewarded in class. The motivation to do so is intrinsic because it comes from within the student and belongs to the subcategory of IMTK due to the student’s intent. Consider that same humanities student who, instead of reading to know more, does so to achieve some other goal they have set for themselves.

A second subcategory of intrinsic motivation is intrinsic motivation to accomplish (IMTA). IMTA is where “the fact of engaging in an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something” (Vallerand et al., 1992, p. 1005). Consider that same humanities student who sets a goal, outside of any required reading for class, to read Joyce’s *Ulysses* by the end of the semester, and does so. This is an example of IMTA because both the goal and the motivation to accomplish it came from within the individual. If reading *Ulysses* was fun, this is an example of another subcategory of intrinsic motivation, intrinsic motivation to experience (IMTE).

IMTE is occurs “when someone engages in an activity in order to experience stimulating sensations (e.g., sensory pleasure, aesthetic experiences, as well as fun and excitement) derived from one’s engagement in the activity” (Vallerand et al., 1992, p. 1006). In the example of the humanities student doing additional reading, if the student

found that reading to be fun and exciting, it would be an example IMTE. Self-Determination Theory, and Vallerand, et al.'s, (1992) instrument, allows for multiple categories of motivation to be experienced simultaneously. The subcategories, operationalized as subscales in the AMS, can be related to, or, correlated, with each other. This relationship among the seven subscales may exist in a particular order (Vallerand et al., 1992).

The subscales are also theorized to exist in a specific order along a continuum (Vallerand et al., 1992). A continuum means that the subscales directly adjacent to each other are more strongly correlated than those that are further away. Thus, the subscales of intrinsic motivation are more strongly related among themselves than they are to the extrinsic motivation subscales. Amotivation is expected to be negatively correlated with intrinsic and extrinsic motivation with the strongest negative relationships being with the intrinsic motivation subscales. Testing for the existence of a continuum is accomplished by calculating the correlation coefficient for each of the subscales in a particular order. If the continuum hypothesis is correct, the results will display a simplex pattern where correlations are strongest for those scales directly adjacent to each other (Vallerand et al., 1992).

SDT supports the hypothesis that a continuum exists for the scales in the AMS. The continuum exists for the broad categories of 1) amotivation , 2) extrinsic motivation, and 3) intrinsic motivation (Vallerand et al., 1992). The numbering denotes the order of the variables not their relative importance. The order of the subscales on the an academic motivation continuum are 1) amotivation , 2) extrinsic motivation—external regulation,

3) extrinsic motivation—introjected regulation, 4) extrinsic motivation—identified regulation, 5) intrinsic motivation—to know, 6) intrinsic motivation—to accomplish, and 7) intrinsic motivation—to experience stimulation (Vallerand et al., 1992).

In Vallerand, et al.'s (1992) study, Pearson's product-moment correlation coefficient was calculated to test for the presence of a simplex pattern. The results indicated that subscales directly adjacent to each other exhibited higher correlation coefficients than those further away. The subscales on the AMS exhibited properties confirming that a continuum was present (Vallerand et al., 1992). Given that the subscales are highly correlated with each other, this may limit future studies that use multivariate regression analysis where the subscales are used as independent variables.

Multivariate regression analysis assumes that independent variables used by predictive models are not correlated with each other. The presence of a simplex pattern in AMS data may confine researchers to using one AMS subscale in single variable regression models. For example, researchers who intend use multiple AMS subscales as independent variables in a predictive model may suffer from multicollinearity problems that could confound their efforts and lead to possible validity problems. Internal validity for the foundational AMS study, Vallerand et al.'s, (1992), included measures of internal validity.

Cronbach's alpha (Cronbach, 1946, 1951) was calculated to test for the internal validity of the scales and the data (Vallerand et al., 1992). Cronbach's alpha, also known as a reliability coefficient (Sekaran, 2003), was used to test each of the seven subscales and their corresponding aggregate scales (Vallerand et al., 1993; Vallerand et al., 1992).

Results from this calculation are compared to specific ranges into which the alpha statistic might fall. “The closer the reliability coefficient gets to 1.0, the better” (Sekaran, 2003, p. 311). More specifically, the results for alphas greater than or equal to 0.90 are considered “excellent.” Alphas greater than or equal to 0.70 and less than 0.90 are said to be “good.” Alphas greater than or equal to 0.60 and less than 0.70 are “acceptable.” Alphas greater than or equal to 0.50 and less than 0.60 are “poor”, and alphas less than 0.50 are “unacceptable” (D. George & Mallery, 2003). Cronbach’s alpha calculations for the AMS indicated mostly “good” levels of validity (Vallerand et al., 1992).

Results revealed that the AMS has adequate levels of reliability and factorial validity, very much in line with those of the original French-Canadian version. With respect to the reliability of the scale, results from this study revealed that the internal consistency of all subscales was adequate, typically ranging in the .80s, with the exception of the Identification subscale which yielded values of .62 in the large sample and .72 and .78 with the second sample used to assess the temporal stability of the scale. (Vallerand et al., 1992, p. 1015)

The validity of the AMS was also tested over time as there were several samples taken at relatively short longitudinal intervals. Vallerand et al., (1992) concluded

[f]inally, it should be reiterated all AMS subscales displayed acceptable levels of temporal stability with a mean test-retest correlation value of 0.79 over a one-month period. These last results support the contention that the AMS measures students’ rather stable motivational orientation toward education. (Vallerand et al., p. 1015)

The stability of the AMS results over time supports the validity and stability of the instrument. A number of other researchers, including Vallerand, also tested the validity of the AMS with mixed results.

ACADEMIC MOTIVATION SCALE VALIDITY STUDIES

A second study designed to investigate the validity of the AMS asked subjects to complete the AMS and several additional scales taken from multiple, well-tested instruments (Vallerand et al., 1993). The scales are grouped into three categories that are motivational constraints, motivational antecedents, and educational outcomes. The motivational construct scales were derived from several existing scales.

The statement “I enjoy doing new work in school,” was used from the Children’s Academic Intrinsic Motivation Inventory’s (Vallerand et al., 1993, p. 163). Two scales, the Work Avoidance scale and Task Orientation scale from Nicholls’ Personal Goals in School Scale, were also used (Vallerand et al., 1993). An example of a statement from the Work Avoidance scale is “I feel successful if I get out of some work,” and an example of a statement from the Task Orientation scale is “I feel successful if I learned something interesting,” (Vallerand et al., 1993, p. 163). These scales, taken from other psychometric instruments, were used to determine how the results from the AMS compared to results from known instruments. The second set of constructs tested were motivational antecedents.

The motivational antecedents category contained a statement from the Perceived Competence scale e.g., “I consider myself a good student” and three classroom climate subscales (Vallerand et al., 1993, p. 163). Those subscales are the Informational Climate, e.g., “The feedback I get from professors is constructive and helps me perform better in my courses,” the Autonomy and Supportive Climate scale, e.g., “My professors provide me with opprotunties to make personal decisions in my studies,” and the Impersonal

Climate scale, e.g., “My professors are indifferent toward me” (Vallerand et al., 1993, p. 163).

The study also used an element from the Educational Optimism Scale adapted from Demer and Brooks (1989) e.g., “At school, I generally look at the brighter side of things,” and the Autonomy subscale from the Self-Actualization Scale (Jones & Crandall, 1986), e.g., “It is better to be yourself than be popular” (Vallerand et al., 1993, p. 164). These scales were also used to test for the concurrence of results when compared to the scores on the AMS. The final set of scales used measured educational outcomes.

The educational outcome scales measured concentration in the classroom, e.g., “In class I am absorbed by the subject” and academic satisfaction, e.g., “I am satisfied with my academic life” (Vallerand et al., 1993, p. 164). Like the AMS, all of these measures are evaluated using seven-point Likert scales. Subjects also self-reported their cumulative grade point averages (GPAs) and answered questions concerning their intentions about future schooling (Vallerand et al., 1993). Four sets of correlations were calculated and Cronbach’s alpha was used to measure the internal validity among the AMS scales. Correlations with AMS subscales were compared to motivational constructs, AMS subscales among themselves, AMS subscales and motivational antecedents, and the AMS subscales and motivational consequences.

For the motivational antecedents investigated, it was hypothesized that the strongest positive correlations should be between the intrinsic motivation (IM) subscales and Intrinsic Interest, in general, and with the IM—to know being the strongest, in particular (Vallerand et al., 1993). The researchers also expected a strong negative

correlation with amotivation and Intrinsic Interest and Task Orientation. The Work Avoidance scale was expected to have a strong positive correlation with amotivation.

Vallerand, et al., (1993) hypothesized that the Work Avoidance scale would be positively correlated with amotivation and negatively correlated with all other AMS scales. “The Work Avoidance scale assesses one’s passivity in the classroom. Therefore, it should correlate positively with the amotivation” and be negatively correlated with intrinsic and extrinsic motivation (Vallerand et al., 1993, p. 165). The study showed this to be the case.

All intrinsic and extrinsic motivation scales were negatively correlated with Work Avoidance. The intrinsic motivation—to know (IMTK) and intrinsic motivation—to accomplish (IMTA) scales correlations with Work Avoidance was $r = -0.15$ and $r = -0.19$ respectively, and was positively correlated with amotivation where $r = 0.26$ (Vallerand et al., 1993, p. 165). Pearson’s product-moment correlation coefficient between Intrinsic Interest and IMTK was $r = 0.67$. The coefficient of correlation between Intrinsic Interest and amotivation was $r = -0.46$. While some of the results have weak relative correlation coefficients, they were statistically significant and confirmed the hypothesized relationships. Stronger correlation coefficients were found among the AMS scales.

The correlations found among the seven subscales indicated relatively strong relationships among scales. “Pearson correlations were computed among the seven subscales in order to test for the presence of specific types of associations based on self-determination theory,” (Vallerand et al., 1993, p. 166). It was expected that the three subscales of intrinsic motivation would be correlated with each other in a simplex pattern

where “adjacent subscales, e.g., introjected and identified regulation, have higher positive correlations, and the scales at opposite ends of the continuum, i.e., amotivation and IM, have the most negative correlations” (Vallerand et al., 1993, p. 166). The calculations also revealed “the three IM scales showed the highest positive correlations among themselves (*rs* of .58, .59, and .62)” (Vallerand et al., 1993, p. 166). The computations also indicated that the “correlations among the 7 subscales generally displayed a simplex pattern” and the “subscales at the opposite ends of the continuum (e.g., amotivation and IM to know, $r = -.43$) displayed more negative correlations than intermediate subscales (Introjections and amotivation, $r = -.22$)” (Vallerand et al., 1993, p. 166). The data supported these hypotheses. The study also sought to test the AMS for internal validity.

The study used Cronbach’s alpha to measure internal validity of the seven AMS subscales. Cronbach’s Alpha was lowest, at .60, for extrinsic motivation identified regulation and highest, at .86, for amotivation. The other scores were EMER $\alpha = .76$, EMIN $\alpha = .81$, IMTK $\alpha = .79$, Intrinsic Motivation toward accomplishment $\alpha = .78$, and IMTE $\alpha = .81$ (Vallerand et al., 1993, p. 165). This indicated internal validity was “good” for five of the seven scales and good for the remainder (D. George & Mallery, 2003; Vallerand et al., 1993).

Vallerand et al., (1993) tested for a possible relationship among the seven subscales on the AMS with educational outcomes. As expected, amotivation was negatively correlated with all of the educational outcome variables and with schooling intentions. Pearson’s product-moment correlation coefficient $r = -0.33$ for concentration

in class, it was for positive emotions in class, and positive for schooling intentions. IMTK was positively correlated with concentration in class, positive emotions in class, academic satisfaction, reported grades, and schooling intentions. These results were expected. They confirmed, along with the previous studies, that the AMS measurements were consistent with the study that developed the AMS (Vallerand et al., 1993; Vallerand et al., 1992).

Testing the AMS in this fashion leads to three general conclusions. “First, correlations between the AMS subscales and various motivational scales yielded results generally in line with predictions from self-determination theory (Deci and Ryan, 1985), thereby supporting concurrent validity of each subscale” (Vallerand et al., 1993, p. 170). The study also tested the instrument for the presence of a simplex pattern among the seven subscales.

Second, correlations among the seven AMS subscales reveals a pattern in line with self-determination continuum (Deci and Ryan, 1985) where adjacent subscales (e.g., introjection and identification) had high positive correlations, and the subscales at the opposite ends of the continuum (i.e., Pearson’s product-moment and IM) had the most negative correlations. (Vallerand et al., 1993, p. 170)

The existence of the simplex pattern confirms the AMS subscales reside along a continuum that is associated with SDT. “Third and final, correlations between the AMS subscales and various variables deemed to represent motivational antecedents and consequences, led to a pattern of results in line with theoretical predictions from cognitive evaluation theory and with findings obtained in other life domains” (Vallerand et al., 1993, p. 170). The results from these tests of the AMS “yielded almost identical

findings of the French form of the scale with respect to the internal consistency, temporal stability, and factorial structure” (Vallerand et al., 1993, p. 161). The results differed from the French version with regard to gender.

Although the gender differences measured by the AMS differed from the EMS, “it appears female students display a more self-determined motivational profile than male students” (Vallerand et al., 1992, p. 1015). The validity of the AMS as an appropriate psychometric instrument was confirmed by the study. The student population used to develop and test the AMS was Canadian (Vallerand et al., 1993; Vallerand et al., 1992). Another AMS validity study was conducted years later with a student population in the United States.

Cokley (2000) tested the AMS for construct validity. This study, conducted at a large Midwestern university, tested the hypothesis that intrinsic and extrinsic motivation scales were distinct. The study “partially replicated the Vallerand, Pelletier, Blais, Briere, Sencal, and Vallieres study” (Cokley, 2000, p. 561). It also sought “to determine if support would be provided for the continuum of self-determination” present in the AMS (Cokley, 2000, p. 561). The results indicated that,

Amotivation, because it is at one end of the continuum, should exhibit more negative relationships with subscales at the opposite end of continuum than subscales which represent opposing motivational forces but are closer in proximity to amotivation; however, the results indicated that amotivation has a stronger negative relationship with Identified Regulation (-.31), followed by To Know (-.27), To Accomplish (-.19), Introjected Regulation (-.12), To Experience Stimulation (-.11), and Extrinsic Regulation (-.02). (Cokley, 2000, p. 563)

The intrinsic motivation scales are expected have stronger negative correlations with amotivation than are the extrinsic scales; however, this was not the case.

The correlations associated with amotivation indicate that a simplex pattern is not supported by the data for those subscales. “This suggests that the differences between intrinsic motivation and extrinsic motivation as measured by the Academic Motivation Scales are not as distinct and well-defined as theory suggests” (Cokley, 2000, p. 563). These findings are in contrast to the studies and data supporting the EME and its English translation the AMS (Vallerand et al., 1989; Vallerand & Blissonnette, 1992; Vallerand et al., 1993; Vallerand et al., 1992). Further study will need to be conducted to confirm or refute Cokley’s (2000a) results. Later studies tested the AMS subscales for their relationships among other psychometric scales, a subject’s gender, and a subject’s grade point average.

The relationship among academic self-concept (ASC), the AMS, gender, and grade point averages (GPAs) was tested to determine what relationships, if any, existed with selected other scales (Cokley et al., 2001). The study hypothesized that intrinsic motivation was positively correlated with ASC (Cokley et al., 2001). GPAs were tested for a positive correlation with intrinsic motivation. The study hypothesized that “students who aspire to higher degrees (i.e., doctorates) would be more intrinsically motivated and have more positive academic self-concepts than students who aspire to lower degrees (i.e., bachelor’s degrees)” (Cokley et al., 2001, p. 112). The study was administered to students taking an undergraduate psychology course.

The sample had 88 males and 169 females and six participants declined to provide gender data (Cokley et al., 2001). The study’s ethnicity was composed of 39 African Americans, 181 European Americans, 6 European Internationals, 2 Asian Americans, 8

Asian Internationals, 6 Latinos, and 16 identified as “other” (Cokley et al., 2001). Ages ranged from 19 to 45 years of age (Cokley et al., 2001). Internal validity was tested using two types of analysis.

Confirmatory factor analysis and Cronbach’s alpha were used to test for internal validity (Cokley et al., 2001). Pearson’s product-moment correlation coefficient was used to test for a relationship among the AMS subscales and ASC. Internal consistency of the AMS was tested using Cronbach’s alpha. The result of each test generally supported the validity of the AMS for use with American students and supported the hypothesized relationships among the scales (Cokley et al., 2001). Confirmatory factor analysis indicated results from this study “were consistent with Vallerand’s (1992) study” (Cokley et al., 2001, p. 116) and differed from his findings in a previous study (Cokley, 2000). The results showed that academic self-concept was significantly and positively correlated with all three IM subscales” (Cokley et al., 2001, p. 116). Not all of the relationships tested were statistically significant.

The study “found no statistically significant gender differences on any of the subscales” (Cokley et al., 2001, p. 117). This differs from Vallerand et al. (1993) where gender differences were present. African-American students were found to have greater levels of extrinsic motivation—external regulation than did their fellow European American students (Cokley et al., 2001). “There were no statistically significant aspirational differences” among students when categorized by race/ethnicity (Cokley et al., 2001, p. 117). Although some AMS subscales were correlated with GPA, “our

findings showed that IM subscales were not significantly correlated with academic achievement” (Cokley et al., 2001, p. 117).

Regarding AMS validity, they concluded, “the seven-factor structure seems to be accurate, but the fact that intrinsic dimensions were not related at all to external academic achievement is counterintuitive and problematic” (Cokley et al., 2001, p. 117).

Researchers are cautioned “when interpreting the results with different ethnic groups for whom intrinsic motivation may not solely promote positive educational and psychological outcomes” (Cokley et al., 2001). The results of this study support Vallerand et al.’s (1993) findings and, in some ways, contradict earlier findings.

In an effort to resolve some of the differences among Vallerand et al. (1992) and Cokley et al. (2000; 2001), Fairchild, Horst, Finney, and Barron (2005) conducted a study to seeking to resolve the somewhat divergent findings in previous studies. They sought “new validity evidence for the Academic Motivation Scale” (Fairchild et al., 2005, p. 331). The study was conducted on a “university-wide Assessment Day the week before the fall semester began” at a mid-sized university on the east coast of the United States (Fairchild et al., 2005, p. 341). “Students completed a number of different paper and pencil instruments, which included several measures of motivation” (Fairchild et al., 2005, p. 341). Students were told the instruments were “tools that are used in the ongoing assessment of students’ motivational development and change over the course of their college careers” (Fairchild et al., 2005, p. 341). A total of 1,460 students completed the AMS. Subject demographic indicated the average age was “18 years, 66% were female, and 88% were Caucasians” (Fairchild et al., 2005, p. 341). The data collected was self-

reported which raises some validity concerns. “All of the measure were susceptible to potential problems associated with self-report measures, e.g., comprehension of items, retrieval of information from memory, judgment of retrieved information and ability to map judgments onto a response scale” (Fairchild et al., 2005, p. 341). Vallerand et al., (1992,1993) tested similar concerns with Canadian students and found no problems with self-reported data. It is likely that Fairchild, et al.’s (2005) sample experienced few problems, if any, regarding the validity of the self-reported data.

Four different instruments were used “to estimate correlations between the AMS and all other measures” (Fairchild et al., 2005, p. 341). Those four instruments were selected by the researchers to validate various aspects of the AMS. The instruments test a subject’s work and family orientation, their motivation to avoid failure, their attitudes toward learning, and their work preferences (Fairchild et al., 2005).

The first instrument used was the Work and Family Orientation (WOFO) questionnaire (Spence & Helmreich, 1983), which is a “19-item measure of achievement motivation that purports to represent stable, enduring personality traits” (Fairchild et al., 2005, p. 342). It was hypothesized that the intrinsic motivation subscales would be positively correlated with certain subscales on the WOFO. The assumed relationship is that the attitudes toward work are effective measures of a student’s attitude to school work. The WOFO measures stable and lasting personality traits, the second scales measures failure avoidance.

The Motive to Avoid Failure instrument (Hagtvet & Benson, 1997) measures a “need to avoid evaluative situational contexts”(Fairchild et al., 2005, p. 343). It also

measures the desire to avoid situations where uncertainty could lead to the possibility of failure. Failing grades, or earning lower grades than desired or expected may affect how students perceive academic activities. For example, a student may avoid a course of study in general, or a specific professor, in particular, to avoid failing.

The third scale against which the AMS was evaluated was the Attitudes Toward Learning questionnaire (Finney, Pieper, & Barron, 2004). Learning attitudes are refined into “five subscales: performance-approach (PAP), performance-avoidance (PAV), mastery-approach (MAP), mastery-avoidance (MAV), and work-avoidance (WAV)” (Fairchild et al., 2005, p. 343). The study tested for association with subscales found on the AMS via Pearson’s product-moment correlation coefficient (Fairchild et al., 2005). The last scale used was the Work Preference Inventory scale (Fairchild et al., 2005).

The Work Preference Inventory (WPI) (Amabile, Hill, Hennessey, & Tighe, 1994) was developed for “working adults, and later rewritten for college students, the student version is titled ‘Preferences for Coursework’” (Fairchild et al., 2005, p. 344). These motivation scales were investigated using Pearson’s product-moment correlation coefficient to determine their relationship with the AMS. In addition to calculating correlation coefficients, the results were analyzed using confirmatory factor analysis, Chi-squared estimation, and Cronbach’s alpha.

Similar to Cokley’s (2001), confirmatory factor analysis (CFA) was used. “CFA allows researchers to compare the ability of competing theoretical models to explain the relationships among observed variables” (Fairchild et al., 2005, p. 344). Three models

were specified “to explain the relationships among responses to the 28 AMS items” (Fairchild et al., 2005, p. 344).

The alternative models employed were a subset of the model tested by Cokley et al. (2001): (a) a seven-factor model based upon Vallerand et al.’s (1992) work; (b) a five factor model corresponding to self-determination theory as defined by Deci and Ryan (Deci & Ryan, 1985b; Ryan & Deci, 2000b); and (c) a three-factor model consisting of an amotivation factor, a general intrinsic motivation factor, and a general extrinsic motivation factor. (Fairchild et al., 2005, p. 344)

In each model, correlations among factors were not restricted, whereas, error variances were prevented from correlating with each other (Fairchild et al., 2005). The Chi-squared test statistic indicated the seven-factor model fit the data well. This confirmed Vallerand et al.’s (1992) results and partially refuted Cokley et al.’s (2000) claims of weak support for AMS validation. “Given the adequate fit of the seven-factor model, we calculated the reliability of the scores” for the models (Fairchild et al., 2005, p. 346). As with previous studies (Cokley, 2000; Cokley et al., 2001; Vallerand et al., 1993; Vallerand et al., 1992), internal reliability was tested with Cronbach’s alpha.

Similar to Vallerand et al.’s (1993) study, Cronbach’s alpha was calculated to test for internal consistency. “The Cronbach’s coefficient α values indicated that the subscales demonstrate adequate internal consistency” (Fairchild et al., 2005, p. 346). This result is consistent with previous AMS validation studies (Cokley et al., 2001; Vallerand et al., 1993). Previous studies (Cokley et al., 2001; Vallerand et al., 1993; Vallerand et al., 1992) also found the presence of a simplex pattern among the seven subscales of the AMS but differences exist among the results. Fairchild, et al., (2005) found stronger

evidence that the AMS subscales existed on a continuum partially supporting Vallerand, et al., (1992) and partially refuting Cokley, et al., (2000).

It was hypothesized that the intrinsic motivation scales from the AMS and the scales used from the Work and Family Orientation scale (WOFO) would be positively correlated (Fairchild et al., 2005). The study found evidence to support the hypothesis. As predicted, the intrinsic motivation scales from the AMS were negatively correlated with the scores on the Motive to Avoid Failure (MAF) instrument (Fairchild et al., 2005). Amotivation was positively correlated the MAF suggesting that those who are motivated to avoid failure may also be amotivated. “Regarding the extrinsic motivation subscales of the AMS, all three were positively associated with the PAP goals as predicted” (Fairchild et al., 2005, p. 350). The intrinsic motivation scales in the Attitudes Toward Learning scales yielded positive correlations with intrinsic motivation scales of the AMS (Fairchild et al., 2005). The WOFO also measures competitiveness. It was hypothesized to positively relate to extrinsic motivation. This also was supported by the data (Fairchild et al., 2005). An additional measure of internal validity, used here and in other studies is Cronbach’s alpha.

Fairchild et al., (2005) calculated test statistics, Cronbach’s alpha and other measures, and used five additional psychometric instruments to investigate the relationships these instruments have with the AMS. The overall goal was to synthesize previous research and test the AMS to resolve apparent divergent results reported in previous studies (Cokley, 2000; Vallerand et al., 1993; Vallerand et al., 1992). Fairchild et al., (2005) also evaluated the AMS using confirmatory factor analysis (CFA). The

results of “the seven-factor model not only outperformed all other models, but also was supported based on fit indices alone” (Fairchild et al., 2005, p. 352). The study also “found good internal consistency for scores from each of the AMS subscales” (Fairchild et al., 2005, p. 352). Overall, the AMS yielded acceptable levels of internal consistency, yet some evidence indicated “the inter-relationship of some subscales raised questions concerning the hypothesized motivational continuum. Specifically, the simplex pattern of the scale was not supported, as the correlations between the subscales did not display the hypothesized ordered magnitudes” (Fairchild et al., 2005, pp. 352-353). The subscales were correlated with each other but not such that a complete simplex pattern existed. This is similar to earlier (Cokley et al., 2001) findings. “Cokley et al. (2001) also questioned the distinctiveness of the IM subscales” (Fairchild et al., 2005, p. 353). Fairchild, et al. (2005), while partially supporting the notion of non-distinct intrinsic motivation subscales, indicates that the “correlational analysis revealed differential relationships between the intrinsic measures and other criteria, suggesting some utility for their separation or continued investigation of their distinctiveness” (Fairchild et al., 2005, p. 353). Although Vallerand et al. (1992, 1993) found evidence for the existence of a simplex pattern, conflicting results from subsequent AMS validation studies indicated more research, or a different statistical technique, was needed.

Miller (2007) conducted a study testing a one-dimensional unfolding model as the analysis method for the AMS. Miller’s (2007) method investigates the continuum of motivation theorized in Self-Determination Theory (SDT). The unfolding method relies on several assumptions. “First, it is assumed that both students and statements can be

located along the same one-dimensional continuum” (Miller, 2007, p. 5). The second assumption is that there is “universal agreement regarding the order of the statements along the continuum even though students are expected to have individual preferences for the statements” (Miller, 2007, p. 5). Miller’s analysis assumes away any possible misunderstanding students may have about the subscales’ meaning.

Miller (2007) further assumes “that a student’s location along the continuum is determined by an ideal-point process” where, “a student is located closest to his or her most-preferred statement” (Miller, 2007, p. 5). The third assumption is predicated on the second assumption of “universal agreement” as to the meaning of each subscale’s wording (Miller, 2007, p. 5). The study also compared the one-dimensional analysis against seven-factor CFA model and tested an edited version of the AMS with 15 statements rather than the 28 in the AMS.

Miller’s (2007) study supported the use of one-dimensional modeling for analyzing the AMS. “A uni-dimensional model was shown to be a plausible alternative to seven-factor CFA model responses for the AMS” (Miller, 2007, p. 99). It also supported the use of an edited shorter version of the 15 item AMS. “Again, this somewhat confirmed the simplex structure according to SDT with the exception that EMID and EMIJ [extrinsic motivation introjected] appeared to be reversed along the continuum” (Miller, 2007, p. 82). Earlier studies found that intrinsic motivation did not follow the simplex pattern (Cokley et al., 2001; Fairchild et al., 2005). These disparate findings indicate more research is needed into the existence of a simplex pattern for the AMS.

SUMMARY

This section contained a discussion of the how the AMS was developed (Vallerand & Blissonnette, 1992; Vallerand et al., 1993; Vallerand et al., 1992). It also discussed several studies that investigated the instrument's validity (Cokley, 2000; Cokley et al., 2001; Fairchild et al., 2005; Miller, 2007). These studies concluded that the AMS is consistent with Self-Determination Theory, has good internal validity, and it is consistent with results from other known scales. The results were mixed for the subscales existence on a continuum as tested by the presence of a simplex pattern (Cokley, 2000; Fairchild et al., 2005). The next section discusses a variety of studies where the AMS was used to investigate relationships among academic motivation and grade point averages, race, gender, and type of college students attend.

Academic Motivation Scales Studies

INTRODUCTION

The AMS has been used in a variety of studies investigating the relationship of academic motivation to academic success, as measured by grade point averages, the relationship among academic motivation, and membership various race and ethnicity communities, and possible differences among academic motivation by institution attended. Also, the AMS has been used in numerous K-12 studies (Acisli, 2012; Adomnik, 2012; Areepattamannil et al., 2011; Ariogul, 2009; Barkoukis et al., 2008; Buff, 2001; Gillet et al., 2012; Horyna & Bonds-Raacke, 2012; Kaminski, 1998; Odom-

Harris, 2010). It is important to note that significant differences exist between students in primary and secondary education institutions and those at college and universities.

The most obvious is age differences between students in primary and secondary institutions is age. Students at for-profit colleges and universities are older than traditional age college students and subsequently, far older than those in secondary schools. A more subtle difference is that attendance at postsecondary institutions is voluntary whereas attendance at a K-12 school is compulsory for children in the United States. While the K-12 studies provide support for the AMS's generalizability to multiple populations, the K-12 populations and those at postsecondary institutions in general, and at for-profits in particular, are sufficiently different that the K-12 AMS studies are not incorporated into this literature review.

Similarly, the AMS has been used in foreign studies assessing the academic motivation of Brazilian medical students (Sobral, 2004) and determining the validity of an instrument used to study Dutch medical education (Kusurkar, Croiset, Kruitwagen, & ten Cate, 2011). Researchers have employed the AMS to investigate the academic motivation of students studying physical education (Bonura, 2010; Ntoumanis, 2001; Oh, 2001; Spittle, Jackson, & Casey, 2009), music performance (McAllister, 1995) and to assess the efficacy of different instructional style (Hughes, 1997). While this supports the applicability of the AMS to a variety of student populations, the for-profit university investigated in this study does not offer similar medical education, physical education, or music performance programs. These populations are sufficiently dissimilar to students at for-profit colleges and universities to warrant their exclusion from this study.

The relationships among academic motivation, age, race and gender, grade point averages, and the type of academic program students attend, has been investigated by several researchers. The next section discusses studies that use grade point averages (GPAs) as dependent variables and the seven subscales from the AMS as independent variables. Subsequent sections discuss studies using the AMS to investigate the aforementioned topics.

GRADE POINT AVERAGE

Barrera (2010) investigated the relationship among academic motivation, GPA, self-efficacy, self-awareness, depression and anxiety. The AMS was used in conjunction with several other psychometric scales that assessed each of the areas under investigation (Barrera, 2010). A convenience sample was taken from two undergraduate psychology classes at Texas A&M Kingsville in fall of 2009 and the spring of 2010. Students were administered a survey containing the AMS, other psychometric instruments, and a personal data questionnaire. Analysis using Pearson's product-moment correlation coefficient revealed no statistically significant relationships among academic motivation and GPA (Barrera, 2010). As discussed by the researcher, the study suffered from data collection issues, such as surveys being administered to incoming freshmen with no reported GPA, and incomplete surveys that, along with the freshmen surveys, were removed from the study. A later study that did not suffer from data collection concerns also examined the relationship among GPA, personality traits, and academic motivation.

Komaraju, Karau, and Schmeck (2009) published a study that used correlation and regression analysis to investigate the relationships among academic motivation,

GPA, and five personality traits. Those traits are neuroticism, extroversion, openness, agreeableness, and conscientiousness (Komarraju et al., 2009). GPAs were negatively correlated with amotivation and positively correlated with the other scales. The highest correlation with GPA occurred with intrinsic motivation toward accomplishment ($r = 0.22$) (Komarraju et al., 2009, p. 48). Results from the step-wise regression analysis indicated no statistically significant relationship between the dependent variable GPA and the independent variables which were the seven AMS subscales (Komarraju et al., 2009, p. 49).

The study was silent on what steps, if any, were taken to mitigate possible biases introduced by multicollinearity among the AMS variables. Although Komarraju et al.'s (2009) regression analysis found no statistically significant relationship between GPA and academic motivation, other studies supported their existence.

GPA, RACE, AND ETHNICITY

The relationship among GPA, academic motivation, and racial identity were explored in a study that used self-reported GPA, the AMS, the Multidimensional Inventory of Black Identity (MIBI), and personal data questionnaire to execute the study (Davis, 2009). The study used a sample of 206 self-reported as African American university students who were second-semester freshmen through seniors at a predominantly White institution in the south. (Davis, 2009). Regression analysis and Person's product-moment correlation coefficient were estimated to evaluate the relationships in question. The study revealed a statistically significant relationship between academic motivation and racial identity (Davis, 2009).

Pearson's product-moment correlation coefficient was significant and highest, at $r = 0.228$, for intrinsic motivation to know and the minority oppressed scale on the MIBI (Davis, 2009, p. 112). A relationship among GPA, the AMS, and the MIBI was also reported. Using GPA as dependent variable and, the author reported that regression analysis revealed that academic motivation and racial identity had value predicting a student's GPA (Davis, 2009). Although statistically significant, the r-squared values estimated were small ($r^2 = 0.092$, $\text{adj. } r^2 = 0.047$) (Davis, 2009, p. 117). The model explains 9.2% of the variation in GPA.

The model had nine independent variables. Coefficient of determination statistics tend to get larger as the number of independent variables increases within a model. Regression analysis assumes the relationship between the dependent variable and independent variables is linear. It further assumes the independent variables are normally distributed and independent of each other. Davis (2009) reported these conditions were met.

A plot was provided with standardized residuals on the y-axis and standardized predicted values on the x-axis appears to be homoscedastic as the author reports (Davis, 2009, 116). The assumption of normality is further supported by a histogram of residual errors that is normally distributed (Davis, 2009, p. 117). Although relatively low numbers for the coefficient of determination may point to problems with the data, it is unlikely this is the case given the evidence provided by the standardized residuals plot and the histogram. Davis (2009) focused on African American students, as did Cokley (2003) in

a study that used GPA, the AMS, and other scales to investigate at two different types of colleges.

Cokley (2003) combines attribution theory with SDT to create a comprehensive theory of African American psychology. “This study uses structural equation modeling (SEM) to investigate the relationships between intrinsic motivation, extrinsic motivation, amotivation, academic self-concept, self-esteem, and academic performance” (Cokley, 2003, p. 536). The instruments used to investigate these relationships were the AMS, the Academic Self-Concept Scale, and the Rosenberg Self-Esteem Scale (Cokley, 2003). Self-reported GPAs were also gathered.

Samples were drawn from a Predominately White College or University (PWCUs) in the Midwest and two Historically Black Colleges or Universities (HBCUs) in the south. The samples were drawn over three years and contained 396 African Americans and 291 White students (Cokley, 2003, p. 540). The analysis revealed some important differences between both racial groups and within the African American community sampled.

African American students at HBCUs had significantly higher intrinsic motivation scores than African Americans at PWCUs (Cokley, 2003). They also had higher extrinsic motivation scores than Whites at PWCUs (Cokley, 2003). African American students at PWCUs reported lower GPAs than their White counterparts. The study revealed there are differences in academic motivation by gender within the African Americans participating in the study.

African American females had higher levels of intrinsic and extrinsic motivation than did African American males (Cokley, 2003). African American males also had higher levels of amotivation than did African American females. Cokley (2003) concludes that “the comparisons of GPAs and the mean scores of academic motivation, academic self-concept, and self-esteem show that, although there are differences in academic performance, African American students do not lack academic motivation” (Cokley, 2003, pp. 552-553). Cokley (2003) used GPA and academic motivation as independent variables to investigate their possible explanatory value for predicting the academic self-concept of African American students. Ochoa (2011) uses the AMS, GPA, gender, and ACT scores to measure academic performance to investigate Hispanic students in Texas.

Ochoa’s study (2011) explored what differences, if any, existed between the academic motivation of first and non-first generation college students. Conducted at the University of Texas Pan American in 2008-09, Ochoa (2011) administered the AMS and a personal data questionnaire (PDQ) to 1,586 students who enrolled that fall (Ochoa, 2012, p. 42). The PDQ included questions about age, ethnicity, whether this was their students first or second semester in college, their GPA, and their composite ACT score. The response rate was 11% with 146 of the 187 responses being usable for the study (Ochoa, 2012, p. 42). Of those 146 usable surveys, 106 were first generation and 40 were non-first generation, 101 were female, 45 were male, 131 were Hispanic, 7 were White, and 4 were African American (Ochoa, 2012, p. 43). Descriptive statistics and regression analysis techniques were used to analyze the data.

Results from the regression analysis performed to assess the difference in academic motivation among first generation and non-first generation students indicated “that there are very few differences in intrinsic and extrinsic motivation in these groups of students” (Ochoa, 2012, p. 74). Statistically significant relationships were found to exist among external regulation and GPA, as well as, intrinsic motivation toward accomplishment and ACT scores (Ochoa, 2012). As with other predictive studies, these GPA and ACT scores had relatively low r-squared results.

External regulation toward accomplishment regressed against ACT scores yielded an $r^2 = 0.16$ (Ochoa, 2012, p. 73). Intrinsic motivation to know regressed against GPA resulted in an $r^2 = 0.063$ (Ochoa, 2012, p. 73). Although these results are statistically significant and indicate the presence of a relationship, that relationship is not strong.

West Indian students at Queensborough Community College were subjects in a study investigating the effects of cultural identity and the number of years lived in the United States had on their academic motivation (Soon, 2011). Subjects were administered the AMS, the Multigroup Ethnic Identity Measure, and a personal demographic questionnaire (Soon, 2011). A total of 76 respondents, who were recruited at the school’s Trinbago club, participated in the study (Soon, 2011). The study “revealed that cultural identity and the number of years lived in the United States did not influence motivation toward academic success among West Indian college students” (Soon, 2011, p. 64). Soon’s (2011) AMS study focused on a relatively small subset of West Indian college students attending a community college. The AMS has also been used to investigate larger populations attending community colleges.

COMMUNITY COLLEGES

Lavender (2005) investigated what effect, if any, academic preparedness had on academic motivation and GPA for community college students. The study was conducted at Gulf Coast Community College (GCCC) in northwest Florida. Academic motivation was measured by the AMS while academic preparedness was measured by the “number of preparatory courses the student took” in high school and their GPA in high school (Lavender, 2005, p. 34). Students who were considered academically prepared were those who received Florida’s Bright Futures scholarship (Lavender, 2005). Students receiving these scholarships had already completed college level work in high school and were automatically eligible to attend one of Florida’s universities yet chose to attend GCCC.

[The] academically unprepared students, were those 2003 high school graduates who, after taking the college placement test, scored below the state of Florida mandated placement scores for college-level study in at least one of the following areas: English, reading, or mathematics. (Lavender, 2005, p. 36)

Eighty-four academically prepared students and 151 academically unprepared students participated in the study.

Each group was given a personal data questionnaire, the AMS, and told that those responding within two weeks of receiving the surveys would be entered into a drawing to win \$50 for their participation (Lavender, 2005, p. 48). Students also volunteered their Social Security Numbers to allow the researcher access to their end of term GPAs. This avoided any possible self-reporting bias in the GPAs because the researchers could acquire an accurate, unbiased accounting of the student’s GPA from the Registrar’s office.

Results of the study indicated that academic preparedness has little effect on intrinsic academic motivation (Lavender, 2005). “Based upon the results from the study, it is apparent that academically prepared and academically unprepared students report no statistically significant difference in intrinsic motivation. This is also true for the three subscales of intrinsic motivation” (Lavender, 2005, p. 64). The same was true for some of the extrinsic motivation scales and amotivation. The study revealed a statistically significant relationship between extrinsic motivation external regulation and GPA for community college students (Lavender, 2005). The next section discusses studies focused on community college students and other variables that might be related to academic motivation.

A 2007 study of nontraditional community college students investigated the relationship among between career goals, environmental influences, and their effects on intrinsic motivation for those students who view college attendance as instrumental to their upward socioeconomic mobility (George). The nontraditional students in this study were defined as “first-generation only, low-income only, or first-generation and low-income” (George, 2007, p. 48). “Low income status was measured using the 2006 Federal TRIO program low-income guidelines in which low-income status is determined by household size and if a family’s income does not exceed 150% of the poverty level amount” (George, 2007, p. 48). Students in the study were administered a personal data questionnaire, the Factors Influencing Pursuit of Higher Education questionnaire, and the AMS. Responses to statements on the AMS measuring amotivation were omitted “because amotivated behaviors are defined as a lack of intention to act or acting without

intent” (George, 2007, p. 50). The study had 151 participants who met the income or generation criteria.

An analysis of the samples indicated there were statistically significant difference among the three groups. “The utility of college in obtaining a desired career goal was statistically significant in increasing nontraditional students’ intrinsic motivation levels. However, the proportion of variance accounted for by career goals was not very large, less than fifty percent” (George, 2007, p. 115). Other relationships were found not to be statistically significant. Attending college was not perceived as a way to increase one’s socioeconomic mobility (George, 2007). “First-generation only status did not have any statistically significant direct or indirect effects on intrinsic motivation” (George, 2007, p. 116). The support of family and friends, when combined into one variable, did not have a statistically significant relationship with intrinsic motivation. Another study investigating students at community colleges used the AMS to analyze the effectiveness of different learning techniques.

The AMS was used to assess the efficacy of mastery learning techniques at a community college in the American south (Rowe, 2010). Students were randomly selected based on their student identification number and asked to volunteer for the study. The control group attended a conventional class whereas the treatment group attended courses designed in a mastery learning environment (Rowe, 2010). The treatment group needed to consent to participation in the mastery learning environment because participation in an experimental class might adversely affect their GPA. The AMS was administered to both groups as a pre-test and as a post-test. Changes in academic

motivation, if any, were assessed by analyzing the results from the pretest and posttest (Rowe, 2010).

The seven motivation scales on the AMS were used as dependent variables rather than independent variables as seen in other studies.

The present study implies that there is a relationship between mastery learning climates and the development of intrinsic motivation, and the project indicates that mastery-learning climates when quantified according to their effect in establishing internalized learning behavior enhance student persistence. (Rowe, 2010, p. 82)

As noted by the researcher, subjects who volunteered for this study may have skewed the results by having higher levels of intrinsic motivation that would affect their decision to volunteer. The results indicate the potential bias may have had an equal effect on the difference between the control group—who experienced no change in academic motivation—and the treatment group—whose level of academic motivation increased as a result of their treatment (Rowe, 2010). Rowe (2010) investigated possible changes in academic motivation as a result of participating in an experimental learning environment. The next section discusses studies that investigate differences in academic motivation by race and ethnicity.

RACE AND ETHNICITY

Factors predicting academic motivation and academic success were investigated in a dissertation (Young, 2008) and a subsequent journal article (Young, Johnson, Hawthorne, & Pugh, 2011). Social support, socioeconomic status (SES), and college generational data were used as predictors of academic motivation, as measured by the AMS, and academic success, as measured by self-reported GPAs (Young et al., 2011).

SES was assessed using the Hollingshead Two-Factor Index (Young et al., 2011). A sample of 93 undergraduates, n = 31 European Americans, n = 31 African Americans, and n = 31 Hispanic Americans, was taken at a college in northeast Texas. All subjects were between the ages of 18 and 24 (Young et al., 2011). Regression and correlational analysis was used to investigate the value of social support, SES, and generational data as independent variables when predicting academic motivation or academic success.

The results indicated that, statistically, social support was significantly correlated with intrinsic and extrinsic motivation for African American students (Young et al., 2011). Also for African American students, all three variables, when used together, had predictive value for intrinsic motivation (Young et al., 2011). The same was not true for European Americans nor for Hispanic Americans. “None of the factors significantly contributed to predicting intrinsic motivation” for Hispanic and White students (Young et al., 2011, p. 64). Similarly, social support had no predictive value for estimating extrinsic motivation for Hispanic and White students (Young et al., 2011). The AMS was also used to explore the relationship among academic motivation and race-related stress.

This study investigated the relationships among race-related stress and academic motivation, self-efficacy, academic and social engagement for African American and Latino college students (Reynolds, Sneva, & Beehler, 2010). Self-efficacy plus academic and social engagement were tested for their predictive value to estimate academic motivation (Reynolds et al., 2010). A sample of 151 African American and Latino students was gathered from volunteers in African American and Latino student organization meetings at two predominately White institutions in the American northeast (Reynolds et

al., 2010). Students were administered the AMS, the College Resilience Questionnaire, the Self-Efficacy Scale, the Index of Race Related Stress-B, and a personal demographic questionnaire (Reynolds et al., 2010, p. 138). The sample included 102 women and 47 men between the ages of 18 and 27 years. The majority of the subjects, (n = 100), were between the ages of 18 and 20 (Reynolds et al., 2010, p. 137). The sample was nearly evenly split between African Americans (n = 76) and Latinos (n = 75). Regression analysis was performed to assess the relationships among the variables where the AMS scales were the dependent variables.

The results support the existence of several relationships. “For all participants, academic and social engagement and self-efficacy accounted for 24% of the variance in intrinsic motivation but only 7% of the variance in extrinsic motivation” (Reynolds et al., 2010, p. 141). This implies extrinsic motivation for students of color is less affected by external events (Reynolds et al., 2010). Analysis of Pearson’s product-moment correlation coefficient revealed “academic engagement significantly contributed to variance in amotivation” (Reynolds et al., 2010, p. 143). Similarly, higher levels of perceived institutional racism were positively correlated and statistically significantly related to amotivation (Reynolds et al., 2010). The results indicate that the level of perceived institutional racism stress has a greater effect on amotivation for African American students than it does for Latinos (Reynolds et al., 2010, p. 143). This section coupled with an earlier section discussing the relationships among academic motivation, race and ethnicity, and GPA are related to the research questions investigated in this study.

PROFESSIONAL PROGRAMS

Hegarty (2010) investigated the notion that academic motivation differed by degree program. The study hypothesizes that graduate Business and graduate Education students will exhibit differing levels of intrinsic motivation. Hegarty (2010) narrowed the study to graduate students who may have different academic motivation than that of college student populations as a whole.

The AMS was used with Business and Education graduate students at a private urban university in the Northeast United States (Hegarty, 2010). The AMS instrument was administered to 240 subjects, 133 graduate Education students (34 males and 99 females) and 107 graduate Business students (52 males, and 55 females), during regularly scheduled class times (Hegarty, 2010, p. 47). The average age of the subjects was 28.7 (Hegarty, 2010, p. 46.). De-identified personal demographic data was gathered along with responses to the AMS. The study combined the AMS results into a Self-Determination Index (SDI) with possible scores ranging from -18 to 18 (Hegarty, 2010, p. 69).

The SDI uses scores from the subscales to calculate an index where negative scores indicated subjects are less self-determined and positive scores indicate subjects are more self-determined (Hegarty, 2010). “For this research, the average SDI returned was 7.30, which is substantially lower than the means from other studies. This finding supports that graduate students are not intrinsically motivated” (Hegarty, 2010, p. 69). A comparison of intrinsic motivation among graduate Business and Education students revealed a statistically significant difference exists between the groups with Education

students scoring higher than Business students (Hegarty, 2010). These conclusions are based on a few assumptions regarding the results from the AMS.

The study investigated the “relationship(s) among personal demographics, motivation orientation, and specific life triggers on the program of study enrollment decisions of adult entering an evening business degree program” (Frazier, 2009, p. 2). Possible programs of study included an evening MBA, Masters of Health Admission (MHA), Master of Science in Leadership and Organizational Change (MSL), a dual MBA/MHA, or dual MBA/MS at Pfeiffer University. Possible life triggers included marriage, divorce, changes in employment, fear of changes in employment, the birth or adoption of a child or children. The sample size for those completing the AMS was 385. (Frazier, 2009).

The study revealed that none of those sampled displayed high levels of amotivation. Approximately 67.79% of the subjects had higher levels of extrinsic motivation than intrinsic motivation (Frazier, 2009, p. 148). Relatively small variations existed by gender for intrinsic and extrinsic motivation. MBA students exhibited more than twice the incident of extrinsic motivation (68.3%) than intrinsic motivation (28.5%) (Frazier, 2009, p. 149). This implies that graduate business students are attending to achieve a separable outcome, which may include a promotion, increase in income, or to advance their careers rather than for intrinsic reasons. Enrollment in professional degree programs appears to be extrinsically motivated. Richardson (2011) tested this idea with a study that tested for differences in registered nurses who matriculated in masters or doctoral programs.

The academic motivation of registered nurses pursuing graduate degrees was assessed using the AMS (Richardson, 2011). The AMS was administered to determine if differences in academic motivation existed among students seeking masters or doctoral degrees (Richardson, 2011). A total of 1,007 students in the American southeast were invited to participate and the response rate was 9% for a total usable response of 93 surveys (Richardson, 2011, p. 51).

The study revealed a difference between mean scores for intrinsic and extrinsic motivation. “[T]he largest total mean scores corresponded to intrinsic motivation-to know, (23.16), extrinsic motivation-identified, (21.72), and intrinsic motivation toward accomplishment, (20.91), which means that the sample endorsed self-determined forms of motivation” (Richardson, 2011, p. 64). Students were extrinsically motivated as well, but those mean scores were lower than the intrinsic numbers. Analysis of the surveys revealed no statistically significant difference in academic motivation between masters and doctoral students (Richardson, 2011). The nursing profession was investigated in another study that explored the relationship among professional values and academic motivation.

The AMS and the Nurse Professional Values Scale Revised (NPVS-R) was given to students seeking an Associate’s degree in nursing at two large community colleges in New York City to determine the relationship among academic motivation and professional values with regard to seeking further education (Hidle, 2011). A total of 114 responses were received, the majority of which, 77%, were from female students.

Findings from this study show that AD [Associate Degree] nursing students who hold high professional nursing values are also self-determined in that they have high intrinsic motivation. These AD nursing students are motivated to learn for the sheer pleasure of learning partially due to their high professional values. (Hidle, 2011, p. 66)

Nearly all of the subjects indicated they intend to continue their nursing education. Eighty-nine percent indicated they “definitely” intend to continue their education and 10% indicated they would “most likely” continue their nursing education (Hidle, 2011, p. 69). Competency appears to be driving students toward higher levels of intrinsic motivation and concern for adherence to professional values.

Chapter Summary

This chapter contained a discussion of current research on the for-profit sector of higher education, a discussion of the theoretical framework used in the study, development of the Academic Motivation Scale (AMS). It also discussed studies investigating the validity of the AMS, studies using the AMS, and studies that use the AMS to investigate topics such as the relationship among academic motivation and grade point averages, the relationship of academic motivation with regard to race and ethnicity, the academic motivation of community college students, and the academic motivations of those enrolled in professional programs. The literature review within contains elements related to answering the three research questions. First, what are the academic motivations of students attending for-profit colleges and universities? Second, what differences, if any, exist in the academic motivation of students at for-profit colleges and universities by age? Third, what value, if any, does academic motivation have for

predicting grade point averages for students attending for-profit colleges and universities?

The theoretical framework upon which the AMS is built is Self-Determination Theory

(SDT) (Deci & Ryan, 1985a).

CHAPTER 3: METHODOLOGY

Introduction

This exploratory quantitative study investigates the academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States. The instrument used to measure academic motivation is the Academic Motivation Scale (AMS) (Vallerand et al., 1992). The AMS, provided in Appendix C, has been used widely and has Self-Determination Theory (SDT) (Deci & Ryan, 1985a; Deci & Ryan, 2000) as its theoretical foundation. This chapter presents the research questions, the research design, the sample selection, data collection, data analysis, and a summary.

Research Questions

Although the AMS has been used to investigate a variety of student populations, it has not been used to assess students attending for-profit colleges and universities (FPCUs). The three research questions contained in this study will help researchers better understand the academic motivation of this important student population. The research questions are:

1. What are the academic motivations of degree-seeking undergraduate students attending a for-profit university in the United States?

2. What relationship, if any, exists among student age and the academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States?
3. What value, if any, does academic motivation have for predicting self-reported grade point averages for degree-seeking undergraduate students attending a for-profit university in the United States?

Each of these questions are operationalized using scores for each of the AMS's seven subscales and aggregate scales coupled with data gathered from a Personal Data Questionnaire (PDQ).

Research Design

This exploratory quantitative study employed a convenience sample in a cross-sectional non-experimental research design. While a random sample would have been preferable, a convenience sample was used because the study's site would not allow a random sample to be drawn from their student population. Each of the research questions was tested via hypotheses that are quantified from the results of the Academic Motivation Scale (AMS) and self-reported personal data questionnaire (PDQ). "Quantitative research is an approach for testing objective theories by examining the relationship among variables" (Creswell, 2013, p. 4). The variables considered were scores on the AMS and the data from the PDQ.

A survey "provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. From sample results,

the researcher generalizes or draws inferences to the population” (Creswell, 2013, pp. 155-156). The student population of concern was undergraduate degree-seeking students attending a for-profit university in the United States. “Data, evidence, and rational considerations shape knowledge. In practice, the researcher collects information on instruments based on measure completed by the participants or by observations recorded by the researcher” (Creswell, 2013, p. 7). The goal was to “develop relevant, true statements, one that can serve to explain the situation of concern or that describe the causal relationships of interest” (Creswell, 2013, p. 7). While the study does not test for causal relationships, it explores possible relationships among academic motivation and self-reported age plus academic motivation and self-reported grade point averages (GPA). Student age and GPAs change over time. This implies a temporal element to the data.

The study was cross-sectional because it looked at one point in time. The AMS and PDQ were administered once and captured academic motivation at one point in the subject’s academic career. Provided in Appendix D, the PDQ gathers anonymous self-reported personal data. Age and GPAs change over time, as may a subject’s academic motivation. While other studies have used the AMS as a pre-test and post-test instrument to measure changes over time, this study assessed subjects once. Subjects were selected via the process discussed next.

Sample Selection

The study was conducted with a large for-profit university headquartered in the United States. A convenience sample was selected from the undergraduate student population attending local courses at four campus locations in the United States. The aggregate local undergraduate student population attending the four campuses was approximately 2,000 when the sample was taken in July 2015.

Faculty teaching local classes at each of the four locations received communication about the study from their local Dean. The documents used for faculty communication are in Appendix B. Faculty were asked to post a Letter of Introduction and a link to this study in their electronic classrooms. It was made clear to the faculty and to the students that participation in the study was voluntary and would not affect their grade, or relationship with participating university in anyway.

The researcher prepared an Internet survey on Survey Gizmo that included a Letter of Introduction, the Informed Consent forms, the Academic Motivation Scale (AMS), and the Personal Data Questionnaire (PDQ). Data collection methods are discussed in detail in the next section. Participation was voluntary and no personally identifiable information was collected. The subjects voluntarily self-reported their age and GPA on the PDQ.

The subjects ($N = 44$) were anonymous to the researcher. Subjects were required to provide informed consent, shown in Appendix E, prior to completing the AMS and PDQ. Subjects who did not accept the terms of the Informed Consent form were not

allowed to proceed to the AMS and PDQ and were not included in the study. Subjects were allowed to print a copy of the Informed Consent form. All of the responses were anonymous. Data collection occurred in several steps that are detailed in the next section.

Data Collection

The data were collected via an Internet survey administered on SurveyGizmo.com. The AMS was loaded into Survey Gizmo along with the personal data questionnaire, and informed consent forms. A link to the study site was provided to subjects within their electronic classrooms. Faculty received communication from their Dean asking for their participation in the study. Faculty who agreed, posted a link to the study site in the course's electronic learning management system (LMS). Students access assignments, textbooks, and faculty communication within the LMS.

Data collection occurred in two steps. Step one was a pilot test of the functionality of the Survey Gizmo site. Step two released the study to remaining undergraduate classes at each of the locations.

PILOT TEST

Subjects for the pilot test were selected from one undergraduate class at each of the four participating campus locations. The intent of pilot test was to determine what problems, if any, may have existed with Survey Gizmo's administration of the study. The pilot test was not repeated because no problems arose during the testing period. The pilot testing phase took two weeks to complete. The pilot test used the same documents—the Letter to the Faculty, Letter of Introduction to the students, Informed Consent, and the

link to the Survey Gizmo site—that was used for the full study. Data gathered during the pilot test were cleared from the survey site prior to releasing for the full study. Faculty and student communication is shown in Appendix B.

FULL STUDY

Step two released the the study’s link to the remaining subjects selected for the study. A similar method was used to communicate with local Deans, faculty, and students. The final study site on Survey Gizmo was open for 14 days.

The AMS had not been used with students attending for-profit universities. It was assumed that there was universal agreement among the subjects concerning the meaning of each of the 28 statements contained in the instrument. This assumption was tested in research question one. As with the pilot test, subjects were anonymous to the researcher.

Once collected, the raw data were reviewed to eliminate responses with incomplete surveys, partially complete PDQs, or any non-random data patterns. For example, if a survey yielded a pattern where all 28 of the subscale statements have the same number for the response, or, the responses appear to form a sequence, those results were excluded from the study. Data analysis began after unacceptable data was removed.

Sample Size

A total of 58 survey responses were gathered, of which, 44 were usable. The unusable responses were rejected for a variety of reasons. Some survey responses were incomplete, formed a non-random pattern, or each of the 28 statements had the same response. The available student population was approximately 2,000 yielding a useable

response rate of approximately 2.2%. It is unknown if all of the 2,000 available subjects received an opportunity to participate. The study site limited the researcher's access to the subjects, such that, follow-up with unresponsive potential participants was not possible.

Data Analysis

Each of the research questions was analyzed using a statistical technique appropriate for the question and the type of data gathered. The tools used to perform the computations were Microsoft Excel for Mac 2016, MiniTab, and SPSS. Excel and MiniTab were used to calculate descriptive statistics, ANOVA, Spearman's rho correlation coefficient, and regression analysis. SPSS was use to estimate Cronbach's alpha.

The Academic Motivation Scale (AMS) had not been used to measure the academic motivation of degree-seeking undergraduate students attending for-profit universities. Although the AMS had been used to measure the academic motivation of various undergraduate student populations in private and public college and universities (Bonura, 2010; Cokley, 2000; Cokley et al., 2001; Duffy, 2008; Komarraju et al., 2009; Ochoa, 2012), researchers cannot assume the instrument has the same reliability characteristics when used with a for-profit postsecondary student population. Some systematic measure of the instrument's reliability was needed to assess the usability of academic motivation measurements.

Cronbach's alpha, also known as "a coefficient of reliability (or consistency)" (Institute for Digital Research and Education, 2013), is a measure of internal reliability. Cronbach's alpha ranges from zero and one. According to George and Mallery (2006), alphas that are greater than or equal to 0.90 are considered "excellent." Alphas greater than or equal to 0.70 and less than 0.90 are considered "good." Alphas that are greater than or equal to 0.60 and less than 0.70 are consider "acceptable." Alphas that are greater than or equal to 0.50 and less than 0.60 are considered "poor," and alphas that are less than or equal to 0.50 are considered "unacceptable." Cronbach's alpha was calculated to assess the reliability of the AMS measurements.

Research questions one asks,

1. What are the academic motivations of degree-seeking undergraduate students attending a for-profit university in the United States?

While there may be many factors affecting the academic motivations of degree-seeking for-profit students, this study narrowed the foci to motivation measured by the Academic Motivation Scale. The AMS was the instrument used to conduct that measurement. The AMS uses a seven-point (1...7) Likert scale to assess each subject's academic motivation (Vallerand et al., 1993; Vallerand et al., 1992). The full AMS is presented in Appendix C. The score for each subscale is calculated by adding each subject's responses to four separate statements according the key shown in Table 1. Possible scores were expected to be between 4, at the lowest, and 28, at the highest. The AMS was expected to yield descriptive data measuring for-profit undergraduate student's academic motivation at a particular point in time.

Table 1: Academic Motivation Scale Key

<u>Scale</u>	<u>Acronym</u>	<u>Statement Number</u>
Amotivation	AM	5, 12, 19, 26
Extrinsic Motivation: External Regulation	EMER	1, 8, 15, 22
Extrinsic Motivation: Introjected	EMIN	7, 14, 21, 28
Extrinsic Motivation: Identification	EMID	3, 10, 17, 24
Intrinsic Motivation To Know	IMTK	2, 9, 16, 23
Intrinsic Motivation: To Accomplish	IMTA	6, 13, 20, 27
Intrinsic Motivation: To Experience	IMTE	4, 11, 18, 25
Extrinsic Motivation	EM	EMER + EMIN + EMID
Intrinsic Motivation	IM	IMTK + IMTA + IMTE

Analysis of variance (ANOVA) was conducted to test for possible difference among subscales and aggregate scale means. ANOVA yields an *F*-statistic with a corresponding *p*-value. *F*-tests were conducted to determine if statistically significant differences among the subscales were present. ANOVA requires data to be normally distributed. IMTE and GPA were normally distributed variables. The remaining subscales and student age were not normally distributed. Levene's test (Doane & Seward, 2007), which does not require normal distribution, was calculated in an effort to support the appropriateness of the ANOVA results (Doane & Seward, 2007).

Previous studies using the AMS have used Cronbach's alpha to assess the reliability of the instrument's measurements (Cokley, 2003; Frazier, 2009; Gillet et al., 2012; Ntoumanis, 2001; Richardson, 2011; Vallerand & Blissonnette, 1992). Cronbach's alpha describes how closely related each of the four separate statements measuring a particular dimension of academic motivation are to each other and provides a measure of the AMS' psychometric properties.

The hypotheses tested the reliability for each of the seven scale measurements were that Cronbach's alpha is greater than 0.50 at a $\alpha = 0.05$ significance level. Feldt's test statistic (Feldt, 1980) provides researchers with an F -distribution test for Cronbach's alpha. The null hypothesis tested was that Cronbach's alpha (r_α) is drawn from population where Cronbach's alpha (ρ_α), in this case, is less than or equal to 0.50. The alternative hypothesis is that ρ_α was greater than to 0.50.

The hypotheses for each Cronbach's alpha calculated is:

$$H_0: \rho_{\alpha_i} \leq 0.50$$

$$H_a: \rho_{\alpha_i} > 0.50$$

Where,

i = 1 represents AM;

i = 2 represents EMER;

i = 3 represents EMIN;

i = 4 represents EMID;

i = 5 represents IMTK;

i = 6 represents IMTA;

i = 7 represents IMTE;

i = 8 represents EM; and

i = 9 represents IM.

Higher scores for Cronbach's alpha indicate higher degrees of reliability among the separate statements assessing academic motivation. Cronbach's alpha has been used

in several recent AMS studies (Boone, 2013; Gillet et al., 2012; Richardson, 2011; Washington, 2009) as a commonly accepted measure of reliability and usability of the AMS' psychometric measurements.

Feldt's (1980) hypothesis test statistic W for Cronbach's alpha uses the F distribution with $(N-1)$ and $(N-1)(k-1)$ degrees of freedom, where N is "the number is of examinees and ρ_α is the population value of the coefficient alpha," r_α is Cronbach's alpha, and k is the number of items (p. 99).

$$W = \frac{(1 - \rho_\alpha)}{(1 - r_\alpha)} F_{N-1, (N-1)(k-1)}$$

Letting ρ_α equal 0.50 and r_α equal the calculated Cronbach's alpha, the null hypothesis is rejected when W 's p -value is less than the significance level $\alpha = 0.05$.

Research question two examined possible relationships in academic motivation by age.

2. What relationship, if any, exists among student age and the academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States?

Several AMS studies tested age as a variable related to academic motivation (Duffy, 2008; Guiffrida et al., 2013; Komarraju et al., 2009; Ochoa, 2012). Given that some of the data was not normally distributed, the statistical test used to evaluate the relationship between each of the AMS subscales and student age was Spearman's rho. Spearman's rho does not require data to be normally distributed. The hypothesis tested was,

$H_0: \rho_i = 0;$

$H_1: \rho_i \neq 0.$

Where,

$i = 1$ represents AM;

$i = 2$ represents EMER;

$i = 3$ represents EMIN;

$i = 4$ represents EMID;

$i = 5$ represents IMTK;

$i = 6$ represents IMTA;

$i = 7$ represents IMTA;

$i = 8$ represents EM; and

$i = 9$ represents IM.

The null hypothesis was rejected when the p -value is less than $\alpha = 0.05$. Previous studies (Cokley et al., 2001; Fairchild et al., 2005; Vallerand & Blissonnette, 1992; Vallerand et al., 1992) reported multicollinearity among AMS variables. While similar results may have been discovered with a for-profit student population, the research questions formulated here minimize the potential of effect of multicollinearity among the AMS variables.

Research question three asks,

3. What value, if any, does academic motivation have for predicting self-reported grade point averages for degree-seeking undergraduate students attending a for-profit university in the United States?

Previous studies (Davis, 2009; Komarraju et al., 2009; Ochoa, 2012) analyzed similar questions using ordinary least squares regression. A regression model was estimated to investigate this question. In the general form,

$$y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

The fitted model becomes,

$$\hat{y}_i = \hat{\beta}_0 + \hat{\beta}_1 x_i + \hat{\varepsilon}_i$$

Substituting GPA for y and letting x = the subscale score the model becomes,

$$\widehat{GPA}_i = \hat{\beta}_0 + \hat{\beta}_1 x_i + \hat{\varepsilon}_i$$

GPA is the dependent variable and the AMS subscale score is the independent variable, where

i = 1 represents AM;

i = 2 represents EMER;

i = 3 represents EMIN;

i = 4 represents EMID;

i = 5 represents IMTK;

i = 6 represents IMTA;

i = 7 represents IMTE;

i = 8 represents EM; and

i = 9 represents IM.

Hypothesis tests for each subscales was,

$$H_0: \hat{\beta}_0 = \hat{\beta}_1 = 0$$

$$H_1: \hat{\beta}_0 \neq \hat{\beta}_1 \neq 0$$

F-tests were calculated with a significance level of $\alpha = 0.05$ and the subsequent *p*-values are reported. The null hypothesis was rejected when the *p*-value was less than 0.05. GPA and one AMS scale, IMTE, were normally distributed. The remaining AMS scales were not normally distributed. Normal data distribution is a requirement of ordinary least squares regression. A data transformation was necessary to make the non-normal data suitable for regression analysis.

A natural log transformation was used for the non-normally distributed AMS variables. The transformation for added one to the maximum value of the subscale or aggregate scale,

$$\ln(29 - x_i) \text{ and,}$$

$$\text{where } i = 1, 2, 3, 4, 5, 6,$$

$$\text{and where } i = 8, 9$$

$$\ln(85 - x_i).$$

The data transformation improved the subscales skewness but did not yield symmetrical distributions.

DATA LIMITATIONS

The convenience sampling method limits the study's generalizability to a larger FPCU student population. Faculty were responsible for posting a link to the study within the classroom portion of their LMS. The research had no way to determine how many faculty posted the study's material to their classrooms. Also, subjects self-selected to

participate possibly affecting data quality and its descriptive characteristics. Small sample sizes further limit the results generalizability.

DATA LOGISTICS

Data was collected via the Internet survey. Raw data was downloaded into formats compatible with Excel was archived in the University of Texas Digital Repository (UTDR). No personally identifiable collected or included in this data set. UTDR is a data service provided by the University of Texas libraries.

Summary

This exploratory quantitative study investigates the academic motivation of students attending for-profit college and universities. The chapter contained the research questions, the research design, the sample selection method, the data collection procedures, a discussion of the data analysis planned, and the hypotheses that were tested.

CHAPTER 4: RESULTS

Introduction

Chapter four presents the results from the pilot test and the full study. Data were gathered in two steps from June 20, 2015 to July 31, 2015. Step one was a pilot test to determine that the survey administered via SurveyGizmo.com was functioning properly. Step two was administration of the survey to a larger sample referred to herein as the full study. Approximately 2,000 possible subjects were available for the study. Ten-percent of those subjects were selected to participate in the pilot test. Subjects who participated in the pilot test were not eligible to participate in the full study. The pilot test and full study used a convenience sample of degree-seeking undergraduate students attending local classes at a large for-profit university.

Data Gathering

The pilot testing period was open from June 30, 2015 through July 12, 2015. A total of 29 responses were gathered for the pilot test. Eight of the surveys contained partial responses. Eliminating partial responses yielded 21 useable responses. Cronbach's alpha (Cronbach, 1951) and Feldt's test statistic (Feldt, 1980) were calculated for the usable responses. Cronbach's alpha was greater than 0.60 for all seven subscales and the two aggregate scales. The Academic Motivation Scale's key is presented Table 2. Five subscales were statistically significant with $p < 0.01$. EMER and EMID were not

statically significant with $p > 0.05$. Results from the pilot test indicated there were no technical issues with the survey's administration and the data gathered was of sufficient quality to proceed to step two where the full study was released. The full study survey site was open from July 13, 2015 through July 31, 2015. A total of 58 surveys were collected with 44 surveys containing complete responses. Incomplete responses and those that exhibited nonrandom responses, or those that formed a pattern were dropped from the analysis. An example of a nonrandom response would be where a pattern was formed.

Research Question One

Research question one asks,

1. What are the academic motivations of degree-seeking undergraduate students attending a for-profit university in the United States?

Table 2. provides a key for the AMS's seven subscales and two aggregate scales. The acronyms presented in Table 2. are used throughout this chapter.

Table 2: Academic Motivation Scale Key

<u>Scale</u>	<u>Acronym</u>	<u>Statement Number</u>
Amotivation	AM	5, 12, 19, 26
Extrinsic Motivation: External Regulation	EMER	1, 8, 15, 22
Extrinsic Motivation: Introjected	EMIN	7, 14, 21, 28
Extrinsic Motivation: Identification	EMID	3, 10, 17, 24
Intrinsic Motivation To Know	IMTK	2, 9, 16, 23
Intrinsic Motivation: To Accomplish	IMTA	6, 13, 20, 27
Intrinsic Motivation: To Experience	IMTE	4, 11, 18, 25
Extrinsic Motivation	EM	EMER + EMIN + EMID
Intrinsic Motivation	IM	IMTK + IMTA + IMTE

Table 3. presents descriptive statistics and test for normality for each measure of academic motivation, self-reported grade point averages (GPA), and self-reported student age. A measure of skewness and the Shapiro-Wilk (Shapiro & Wilk, 1965) are presented. One subscale and one variable collected, IMTE and GPA, are normally distributed, yet negatively skewed. Amotivation (AM) is positively skewed and the remaining subscales are not normally distributed and are negatively skewed. The non-normality of some of the subscales present challenges using the ANOVA technique which is commonly used to test for differences among variable means (Doane & Seward, 2007).

ANOVA assumes variables are normally distributed and have equal variances. In instances where variables are not normally distributed, Levene's test, "which does not assume a normal distribution," can be used to confirm homogeneity of variances lending validity to the appropriateness of ANOVA with skewed data (Doane & Seward, 2007, p. 454). The null hypothesis for ANOVA is that the means in question are equal and the alternate hypothesis is that the means are different. The null hypothesis for Levene's test is equal population variances among the variables and the alternate hypothesis is unequal variances.

Table 3: Academic Motivation Scale Descriptive Statistics

<u>Source</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>Skewness</u>	<u>Shapiro-Wilk p-value</u>
AM	44	5.477	3.605	3.472	0.000
EMER	44	24.023	4.953	-2.298	0.000
EMIN	44	21.818	7.170	-1.414	0.000
EMID	44	24.136	4.659	-1.599	0.000
IMTK	44	22.750	4.853	-0.879	0.001
IMTA	44	21.977	6.204	-1.215	0.000
IMTE	44	16.636	5.507	-0.111	0.482
EM	44	69.977	14.353	-1.727	0.000
IM	44	61.364	14.584	-0.538	0.010
Age	44	37.48	9.598	0.448	0.016
GPA	44	3.34	0.442	-0.508	0.133

The subjects in this sample exhibited relatively low levels of amotivation (AM) ($M = 5.477$, $SD = 3.605$) versus subscale scores of over twenty for all but intrinsic motivation to experience (IMTE). The distinction among the other subscales and between the two aggregate scales is less pronounced. An F -test was conducted to test for a possible difference among the subscales and aggregate means of EM and IM. The F -test comparing EM to IM indicated that EM ($M = 69.977$, $SD = 14.353$) and IM ($M = 61.364$, $SD = 9.598$) are statistically significantly different $F(1,86) = 7.796$, $p < 0.01$. Levene's test between EM and IM yielded $p = 0.261$, thus failing to reject the null hypothesis of equal variances and supporting the appropriateness of using the ANOVA technique (Doane & Seward, 2007). Subjects in this data set exhibit statistically significantly higher levels of aggregate extrinsic motivation than aggregate intrinsic motivation.

The same technique employing ANOVA and Levene's test was conducted to investigate possible differences among the three extrinsic motivation subscales of EMER

($M = 24.023$, $SD = 4.953$), EMIN ($M = 21.818$, $SD = 7.170$), and EMID ($M = 24.136$, $SD = 4.659$). An F -test comparing the means $F(2,129) = 2.309$, $p = 0.104$ indicated the three are not statistically significantly different where $\alpha = 0.05$. Levene's test calculated a $p = 0.116$ failing to reject the null hypothesis of equal variances supporting results of the F -test. While students exhibit higher levels of extrinsic motivation, in general, there are no statistically significant differences among the three subscale measures of extrinsic motivation, in particular. Similar F -tests were conducted for the three subscales of intrinsic motivation.

An F -test comparing the means of the three measures of intrinsic motivation, IMTK ($M = 22.750$, $SD = 4.853$), IMTA ($M = 22.977$, $SD = 6.204$), and IMTE ($M = 16.636$, $SD = 5.507$) $F(2,129) = 15.840$, $p < 0.01$ indicated the three are statistically significantly different. Levene's test $p = 0.477$ supports the F -test finding of different means. Subsequent F -tests evaluating differences in the means between IMTK and IMTA $F(1,86) = 0.424$, $p = 0.517$ indicated no statistically significant difference. Levene's test $p = 0.266$ supports the F -test finding. Testing for difference between IMTA and IMTE $F(1,86) = 18.239$, $p < 0.01$ and Levene's test $p = 0.792$ revealing statistically significant differences between the two subscales.

ANOVA results for intrinsic motivation indicates the for-profit students in this convenience sample have similar levels of intrinsic motivation to know (IMTK) and intrinsic motivation to accomplish (IMTA) and display lower levels of being motivated by the college experience (IMTE). Levene's test and F -tests were used to evaluate

possible difference among measures of academic motivation. Cronbach's alpha tests how each of the instrument's statements are internally consistent with each other.

Cronbach's alpha is a measure of an instrument's internal consistency that does not assume data are normally distributed (Zumbo, 1999). Cronbach's alpha was calculated for each of the seven subscales using the four statements that comprise the score. The aggregate measures, EM and IM, are the sums of each of the three subscales totaling 12 statements.

Table 4. presents Cronbach's alpha statistics and Feldt's test statistic (Feldt, 1980) for the seven subscales and two aggregate measures. Results indicate that two subscales (EMID and IMTK) are "acceptable," two subscales (AM and EMER) are "good," and the remaining five subscales are "excellent" (D. George & Mallery, 2003). Relatively high values for Cronbach's alphas indicate the Academic Motivation Scale is appropriate for use with undergraduate degree-seeking students at for-profit universities in the United States.

Fedlt's test statistic (Feldt, 1980) provides researchers with an F -distribution test for Cronbach's alpha. The null hypothesis tested is that Cronbach's alpha (r_α) is drawn from population where Cronbach's alpha (ρ_α), in this case, is less than or equal to 0.50. The alternative hypothesis is that ρ_α is greater than 0.50.

$$H_0: \rho_\alpha \leq 0.50$$

$$H_1: \rho_\alpha > 0.50$$

Each of the seven subscales and the two aggregate scales were tested where $\alpha = 0.05$. In all cases the null hypothesis was rejected. Use of Feldt's W also allows

researchers to change the value of ρ_α to approximate, through trial and error, higher values for Cronbach's alpha that will continue to allow rejection of the null hypothesis.

The summary results of those tests are presented in Table 4.

George and Mallery (2006) indicate Cronbach's alphas greater than 0.70 are preferred for research. All seven of the subscales had Cronbach's alphas are greater than 0.70. EMID and IMTE had Cronbach's alphas of 0.754 and 0.784 respectively. All others had Cronbach's alphas greater than 0.80.

Table 4: Cronbach's Alpha for the Academic Motivation Scale

Source	n	k	Cronbach's Alpha (r_α)	Internal Consistency	ρ_α	p-value
AM	44	4	0.839**	Good	0.75	0.031
EMER	44	4	0.852**	Good	0.75	0.013
EMIN	44	4	0.913**	Excellent	0.85	0.011
EMID	44	4	0.754**	Acceptable	0.60	0.019
IMTK	44	4	0.908**	Excellent	0.85	0.018
IMTA	44	4	0.930**	Excellent	0.85	0.001
IMTE	44	4	0.784**	Acceptable	0.65	0.021
EM	44	12	0.908**	Excellent	0.85	0.008
IM	44	12	0.929**	Excellent	0.85	0.000

** significant $\rho_\alpha = 0.50$ and $\alpha = 0.01$

Research Question Two

Research question two examines possible relationships among academic motivation and self-reported student age. Given that only IMTE is normally distributed, Spearman's rho, which does not require a normal distribution, was used (Doane & Seward, 2007). Table 4. presents Spearman's rho (ρ) calculations for each of the

subscales and aggregate scales correlation with age. The corresponding p -values are also reported. Research question two asks,

2. What relationship, if any, exists among student age and the academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States?

Spearman's rho analysis revealed no statistically significant correlation with age for any of the seven subscales, or for the aggregate measures of academic motivation.

Table 4.: Spearman's rho for Age and AMS subscales

	<u>Spearman's Rho</u>	<u>p-value</u>
AM	-0.197	0.202
EMER	-0.052	0.739
EMIN	0.024	0.870
EMID	0.074	0.633
IMTK	0.196	0.201
IMTA*	0.236	0.123
IMTE*	0.209	0.174
EM	0.002	0.991
IM	0.193	0.210

*Statistically significant where $\alpha = 0.20$.

Subject ages ($M = 37.48$, $SD = 9.598$) ranged from 23 to 58. Intrinsic motivation to accomplish (IMTA) had the lowest p -value (0.123) and the highest correlation ($\rho = 0.236$) with age. The correlation between Age and IMTA was statistically significant where $\alpha = 0.15$. The evidence suggests IMTA has a relatively weak correlation with age.

The correlation between Age and intrinsic motivation to experience (IMTE) ($\rho = 0.196$, $p = 0.174$) was statistically significant where $\alpha = 0.20$. Intrinsic motivation to know (IMTK) and none of the measures of extrinsic motivation are statistically significant where $\alpha = 0.20$.

Amotivation was negatively correlated with Age and statistically significant where $\alpha = 0.20$. The results from this sample indicate a relatively weak relationship between intrinsic motivation and age. No statistically significant relationship was discovered between each of the extrinsic motivation subscales and age. Similarly, no statistically significant relationship were found between amotivation and age. The two aggregate measures, EM and IM, were not statistically significantly related to age.

Research Question Three

Research question three examines possible relationships between self-reported grade point average (GPA) and academic motivation. Research question three asks,

3. What value, if any, does academic motivation have for predicting self-reported grade point averages for degree-seeking undergraduate students attending a for-profit university in the United States?

Research question three is operationalized as single variable linear regression model.

$$y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

The fitted model becomes,

$$\hat{y}_i = \hat{\beta}_0 + \hat{\beta}_1 x_i + \hat{\varepsilon}_i$$

Substituting GPA for y and letting x_i = the subscale scores, the model becomes,

$$\widehat{GPA}_i = \hat{\beta}_0 + \hat{\beta}_1 x_i + \hat{\varepsilon}_i$$

GPA is the dependent variable and the AMS subscale score is the independent variable.

i = 1 represents AM;

i = 2 represents EMER;

i = 3 represents EMIN;
i = 4 represents EMID;
i = 5 represents IMTK;
i = 6 represents IMTA;
i = 7 represents IMTE;
i = 8 represents EM; and
i = 9 represents IM.

Hypothesis tests for each subscales is,

$$H_0: \hat{\beta}_0 = \hat{\beta}_1 = 0$$

$$H_1: \hat{\beta}_0 \neq \hat{\beta}_1 \neq 0$$

Ordinary least squares regression (OLS) requires both the dependent and the independent variables to be normally distributed. Grade point average (GPA) and intrinsic motivation to experience (IMTE) are normally distributed. Using OLS analysis with GPA as the dependent variable and IMTE as the independent variable yielded no statistically significant relationship between the two variables ($r^2 = 0.000$, p -value = 0.937).

Given that only GPA and IMTE are normally distributed, regressing the remaining subscales against GPA using ordinary least squares (OLS) regression violates one of OLS's assumption regarding the normality of the variables. Transforming the data into a more normal distribution was required. The non-normal subscale data were transformed into a more normal distribution using a natural log transformation. The natural log transformation was executed as follows.

Let x_i equal each of the subscales where,

$i = 1$ represents AM;

$i = 2$ represents EMER;

$i = 3$ represents EMIN;

$i = 4$ represents EMID;

$i = 5$ represents IMTK;

$i = 6$ represents IMTA;

$i = 7$ represents IMTE;

$i = 8$ represents EM; and

$i = 9$ represents IM.

The transformation for $i = 1, 2, 3, 4, 5, 6$, added one to the maximum value of the subscale or aggregate scale,

$\ln(29 - x_i)$ and,

and where $i = 8, 9$

$\ln(85 - x_i)$.

The subscale IMTE, $i = 7$, did not need to be transformed because it was normally distributed when captured by the survey. The natural log transformation mitigated the data's negative skew but did not mitigate the data's lack of symmetry. Table 5. presents the coefficient of determination, the F -test, and p -value for the measures of academic motivation as the independent variable and GPA as the dependent variable using the natural log transformed data.

Table 5: Natural Log Transformation Linear Regression Analysis

<u>Independent Variable</u>	<u>r^2</u>	<u>F</u>	<u>p-value</u>
AM	0.016	0.678	0.415
EMER	0.016	0.669	0.408
EMIN	0.009	0.371	0.546
EMID	0.001	0.034	0.854
IMTK	0.022	0.940	0.338
IMTA	0.000	0.000	0.979
IMTE*	0.000	0.010	0.937
EM	0.012	0.504	0.485
IM	0.000	0.000	0.945

*IMTE was not transformed. GPA and IMTE were normally distributed when collected.

Analysis of the natural log transformed data indicates there are no statistically significant linear relationships between academic motivation and GPA. In all cases where academic motivation is the independent variable and GPA is the dependent variable, p -values indicated a failure to reject the null hypothesis.

Summary

This chapter contains the results of the study. The academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States was measured using the Academic Motivation Scale (AMS) (Vallerand et al., 1992). Data was gathered in July of 2015 from a convenience sample population of approximately 2,000 subjects. A pilot test to assess the functionality of the survey's administration on SurveyGizmo.com. The pilot test gathered 21 usable responses with sufficient data quality to proceed to release of the full study.

The full study yielded 44 usable responses. One subscale, IMTE, and one variable, self-reported GPA, are normally distributed and negatively skewed. Amotivation was not normally distributed and is negatively skewed. The remaining subscales, aggregate subscales were not normally distributed and negatively skewed. Age was not normally distributed and was positively skewed. Research question one asked about the measures of academic motivation for undergraduate degree-seeking students at a for-profit university in the United States. Students had lower levels of amotivation than extrinsic or intrinsic motivation. Subjects exhibited higher levels of extrinsic motivation than intrinsic motivation. There were no statistically significant differences among the three extrinsic motivation subscales. Intrinsic motivation to experience (IMTE) is lower and statistically significantly different from intrinsic motivation to accomplish (IMTA) and intrinsic motivation to know (IMTK). IMTA and IMTK are not statistically significantly different.

The internal consistency and reliability of the subscales were measured by Cronbach's alpha (Cronbach, 1951) and were tested via an *F*-distribution (Feldt, 1980) created to evaluate Cronbach's alpha. Results from Cronbach's alpha and Feldt's *F*-test indicated the AMS had acceptable to excellent internal consistency and reliability. The Academic Motivation Scale appears to be appropriate for use with a degree-seeking undergraduate student population at for-profit universities in the United States. Research question two investigated possible relationship between academic motivation and age.

Spearman's rho was estimated to test for possible correlations between age and each of the subscales and aggregate scales. For the subjects in this sample, there were no

statistically significant correlations between academic motivation and age. Research question three investigated what predicative value, if any, might academic motivation have for predicting grade point average (GPA).

Regression analysis was conducted with GPA as the dependent variable and each of the academic motivation subscales and aggregates scales as the independent variable. One ordinary least squares (OLS) regression equations was estimated with GPA as the dependent variable and IMTE as the independent variable. No statistically significant linear relationship was found between the two variables. Given that six of the seven subscales, and the two aggregate scales, were not normally distributed, a natural log transformation was conducted to mitigate the data's skewness. Seven separate OLS equations were estimated with the restated data and none indicated a statistically significant relationship between GPA and academic motivation.

CHAPTER 5: CONCLUSIONS

Introduction

Chapter five contains a summary of the study, its results, implications for researchers, and policymakers. It provides conclusions that can be drawn from the analysis and offers recommendations for further study. As of 2013, approximately 11% of all college and university student attend for-profit colleges and universities (FPCUs) yet they consume over 24% of all federally backed student financial aid (Bok, 2013; Snyder & Dillow, 2012). The literature contains relatively few studies investigating FPCU students and, to date, there have been no systematic inquiries into the academic motivation of degree-seeking undergraduate students attending FPCUs. This exploratory quantitative study begins to fill that gap by using a well-tested psychometric instrument, the Academic Motivation Scales (Vallerand et al., 1992), to explore and measure the academic motivation of degree-seeking undergraduate attending a for-profit university in the United States.

FPCUs are reluctant to engage in outside research. Several of the for-profit universities invited to participate in this study declined citing university policy against engaging in any outside research. After approximately one year of negotiations, the site used in this study agreed to allow a convenience sampling of its student population. Access was limited to a narrow subset of the student population attending face-to-face courses at local campuses. While variables such as gender, race, and ethnicity were of

interest, demographic data were limited by the site to a subject's self-reported age and self-reported GPA.

Researcher Positionality

I served as Chair for the School of Business at a for-profit university for ten years and currently serve as a local Dean at the same institution. The results presented here align with my experiences and with the anecdotal evidence I gathered through that experience. My job duties included hiring, training and supervising faculty plus teaching 15 credits of economics, finance, and business statistics each calendar year.

Summary of the Findings

This exploratory quantitative study begins to fill a gap in the literature by investigating the academic motivation of undergraduate degree-seeking students by using a well-tested psychometric instrument. The study also explored possible relationships among academic motivation, a student's self-reported age, and their self-reported GPA. The instrument used to measure academic motivation is the Academic Motivation Scale (AMS) (Vallerand et al., 1992).

RESEARCH QUESTION ONE

Research question one asked,

1. What are the academic motivations of degree-seeking undergraduate students attending a for-profit university in the United States?

The AMS is a well-tested psychometric instrument rooted in Self-Determination

Theory (Deci & Ryan, 1985a; Deci & Ryan, 2000), that explored student motivation by measuring extrinsic, intrinsic, and amotivation using seven point Likert scales (Vallerand et al., 1992). Extrinsic and intrinsic motivation scales were each divided into three subscales. Amotivation, which is the absence of extrinsic or intrinsic motivation, was also measured for a total of seven subscales (Vallerand & Blissonnette, 1992).

ANOVA coupled with Levene's test revealed that extrinsic motivation identified ($M = 24.136$, $SD = 4.659$), introjected ($M = 21.818$, $SD = 7.170$), external regulation ($M = 24.023$, $SD = 4.953$) were not statistically significantly different from each other.

Previous studies investigating students at traditional universities (Cokley, 2000; Fairchild et al., 2005) questioned the distinction among the Academic Motivation Scale variables.

The small sample size and convenience sampling method used here limits direct comparison of the results to other studies. Although there were no distinct differences among the extrinsic motivation subscales, the aggregate measure of extrinsic motivation ($M = 69.977$, $SD = 14.353$) was statistically significantly larger than the aggregate measure of intrinsic motivation ($M = 61.364$, $SD = 14.584$) implying FPCU students are more extrinsically motivated than intrinsically motivated. The intrinsic motivation subscales exhibited slightly more distinction among the three than did extrinsic motivation.

Intrinsic motivation to experience ($M = 16.636$, $SD = 5.507$) was statistically significantly lower than both intrinsic motivation to know ($M = 22.750$, $SD = 4.853$) and intrinsic motivation to accomplish ($M = 21.977$, $SD = 6.204$). Intrinsic motivation to know and to accomplish were not statistically significantly different and were generally

lower than the measure of extrinsic motivation. An important element of previous studies using the AMS (Cokley, 2003; Keller, 2007; Vallerand & Blissonnette, 1992) included measure of the instrument's internal reliability.

Reliability among the subscales was tested using Cronbach's alpha (Cronbach, 1951) and Felt's *W* (Feldt, 1980). Cronbach's alpha measures the reliability and internal consistency of psychometric instruments (Cronbach, 1951) and Felt's *W* (Feldt, 1980) provides an *F*-distribution test statistic with which to test the statistical significance of Cronbach's alpha. All seven of the AMS's subscales had "acceptable," (D. George & Mallery, 2006) or better, reliability and were all statistically significant. Cronbach's alpha was greater than 0.70 indicating that the subscales had relatively high degrees of internal consistency and reliability. The results indicate that the AMS may be appropriate for use with the degree-seeking undergraduate for-profit student populations.

A convenience sampling method was used because a more rigorous randomly selected sample was not possible at the study site. Two of the universities contacted as potential sites for the study declined to participate citing it was against university policy to participate in outside research. Multiple for-profit universities were contacted and only one agreed to participate.

It took approximately one year of negotiations to secure access to the for-profit student population. The site also limited access to to students attending face-to-face classes. The site agreeing to host the study also declined to provide resources and personnel that would have supported a larger random sample. The relatively small sample size ($N = 44$) was drawn from a total available student population of 2,000. The small

sample size coupled with the convenience sampling method limits the study's generalizability to larger for-profit student populations.

The results from Cronbach's alpha analysis imply the Academic Motivation Scale (AMS) may be suitable for use with for-profit student populations. Confidence in AMS's ability to measure academic motivation is tempered by the small sample size and non-random sampling method. It appears the AMS has good validity and reliability but the results may not be generalized to for-profit student populations as a whole.

A current meme in the higher education press is that for-profit students are somehow duped into attending through deceptive marketing tactics (Smith, 2015). While there are some bad actors in the sector, Corinthian College was shut down for such conduct (Smith, 2015), it is unclear if this is pervasive in the industry. Consider a scenario where a for-profit student does not know why she has enrolled.

One might expect relatively high scores for amotivation for this student. Analysis revealed that for-profit students in this sample had low levels of amotivation ($M = 5.477$, $SD = 3.605$). For example, in a response to the survey's overall focus investigating "[w]hy do you go to college," statement number five on the AMS states, "[h]onestly, I don't know; I really feel that I am wasting my time in school" (Vallerand et al., 1992). The mean for that statement is $M = 1.25$ ($SD = 0.719$) on a scale from one to seven. The aggregate mean for the four statements measuring amotivation is $M = 5.477$ ($SD = 3.605$) on scale from four to 28. Relatively low levels of amotivation imply students in this sample know why they are attending college.

This study does not assess the validity of those reasons for attending. It is possible

that students attending the study site may have unrealistic expectations about potential benefits a degree might bring, such as, a promotion, a better job, or being more competitive in the job market. Potential benefits that are external to the student are examples of extrinsic motivation. Measures of extrinsic motivation capture the degree to which students are motivated by separable outcomes.

The mean for the aggregate measure of extrinsic motivation (EM) ($M = 69.977$, $SD = 14.353$) is 8.631 points higher than the aggregate measure of intrinsic motivation (IM) ($M = 61.364$, $SD = 14.584$) and the two measures are statistically significantly different. Subjects in this sample exhibit greater motivation to achieve some separable outcome, such as, earning a degree to get a better job, or, to progress in their careers, rather than by a desire to earn an education for its own sake. The students sampled also displayed statistically significantly different levels of intrinsic motivation to experience. These findings, relatively higher levels of extrinsic motivation than intrinsic motivation, are consistent with the principle upon which for-profits are founded.

By definition, one goal of an FPCU is to earn a profit. Some FPCUs were started as degree completion institutions who earn a profit by serving an unmet need in the marketplace for postsecondary education. Higher education entrepreneurs observed a number of working adults who had not finished college and needed to complete a degree. Many FPCUs were founded to educate working adult students not served by traditional institutions of higher education.

Traditional public and private nonprofit colleges and universities typically serve full-time residential students who have relatively few obligations outside of school.

Although some degree programs at traditional colleges and universities make accommodations for working adults, the majority of their students attend full-time during the work day. It is difficult, if not impossible, for some for-profit students to attend during the work day. For-profit students often have professional and family obligations that prohibit their attendance during the day.

While FPCU students might want to attend a traditional university, doing so may be difficult because course schedules are less accommodating for students who work full-time. It may be unrealistic for those students to quit their jobs and show up on campus each morning for class. FPCUs course schedules—online asynchronous courses where student can attend at their convenience, or attending class after the work day has finished—make it easier for students to attend college full-time and complete their degrees. Although FPCUs strive to make attendance convenient for working adults, pursuing a degree requires students to make changes to their weekly schedules to focus on school work.

The opportunity cost of going to college for working adults includes time away from family, time away from friends, and a foregone return on monies earned, or devoted to school rather than other investment opportunities. Relatively low levels of amotivation coupled with relatively high levels of extrinsic motivation implies FPCU students know why they are attending and are doing so to achieve some separable outcome.

While there were no statistically significant differences among the three extrinsic motivation subscales, one of the intrinsic motivation subscales, intrinsic motivation to experience (IMTE) ($M = 16.636$, $SD = 5.507$), was smaller and statistically significantly

different from intrinsic motivation to accomplish (IMTA) ($M = 21.977$, $SD = 6.204$), and intrinsic motivation to know (IMTK) ($M = 22.750$, $SD = 4.825$). The FPCU students in this sample are less motivated by the college experience than they are by the knowledge and the accomplishment associated with earning a degree. Although FPCU students may form temporary, or lasting, social connections during their college experience, making such connections motivates them less than achieving the separable outcome of the degree. Relatively low levels of IMTE may be related to age.

The students in this sample had an average age of 37.48 ($SD = 9.598$) years, a median age of 36, and an age range from 23 to 58 years. Older students tend to have work and family obligations, which may have higher self-determined priorities than experiencing college similarly to residential students aged 18 to 22. Given the large age differential between traditional age students and for-profit students, possible relationships between age and academic motivation were investigated.

RESEARCH QUESTION TWO

Research question two tested for a correlation between academic motivation and the student's age.

Research question two asks,

2. What relationship, if any, exists among student age and the academic motivation of degree-seeking undergraduate students attending a for-profit university in the United States?

Students attending for-profit colleges and universities have different demographic characteristics than traditional college students, in general, and tend to be older, in

particular. Correlation coefficients were estimated to determine if age was correlated with academic motivation. This sample indicated that age was not correlated with academic motivation. The convenience sample method and relatively small sample size ($N = 44$) may have adversely affected the discovery of possible relationships between age and academic motivation.

The sampling method was a convenience sample of students who self-selected to participate from a population of approximately 2,000. One variable, grade point average (GPA), and one subscale (IMTE) were normally distributed. The remaining subscales and age were not normally distributed. Spearman's rho, which does not require data to be normally distributed, was used to test for relationships between academic motivation and age. Spearman's rho analysis indicated no statistically significant relationships between academic motivations and age were present in this sample. A larger random sample may have yielded normally distributed subscales and variables. More data points may have revealed relationships between age and academic motivation that were not found in this sample. A more robust random sample was not possible because the participating site would not allow it. A larger random sample may improve data quality and yield different results.

A student's academic motivation may have a relationship with their GPA. Relatively high levels of amotivation may have a relationship with relatively lower GPAs. Conversely, relatively high levels of intrinsic or extrinsic motivation may have a positive relationship with relatively high GPAs. Academic motivation may have predictive value for estimating GPA.

RESEARCH QUESTION THREE

Research question three asks,

3. What value, if any, does academic motivation have for predicting self-reported grade point averages for degree-seeking undergraduate students attending a for-profit university in the United States?

Nine separate ordinary least squares (OLS) regression equations were estimated with each of the subscales as independent variables and GPA as the dependent variable.

OLS requires the independent and dependent variables to be normally distributed. Only intrinsic motivation to experience (IMTE) and GPA were normally distributed. Each of the non-normal subscales were restated using a natural log transformation and the OLS regression was conducted with the transformed data. Results from the transformed and non-transformed data revealed that academic motivation was not a statistically significant predictor of GPA. The null result may have been a function of the small sample size. A larger randomly selected sample may reveal relationships not found with a convenience sample.

The Box-Cox (Box & Cox, 1964) data transformation method was used and the OLS regressions were run using the transformed data. The Box-Cox transformation did not yield better results. Multivariate regression models were explored by specifying various combinations of AMS subscales. Those models yielded similarly poor results and also suffered from multicollinearity problems. Restating the data using a natural log transformation yielded the best results and was the simplest transformation method.

FPCU student's GPAs could be affected by a variety of influences other than academic motivation.

Nontraditional students tend to have competing obligations outside of school that may affect their GPAs. Professional and family commitments could consume valuable study time reducing the amount of time available to devote to schoolwork. Some students are required to travel for work, or are required to fulfill familial expectations that could adversely affect GPA.

Expected, or unexpected, business trips could require students to miss class as their careers and support of their families may have a higher priority than do their academic pursuits. Some students may let their grades slip intentionally because they do not have enough time to complete course assignments or choose other activities over working on assignments. Like traditional age students, some students at for-profits are concerned deeply about their GPAs. Others put forth just enough effort to pass and maintain their enrollment and financial aid eligibility. Other FPCU students may willingly sacrifice their GPAs to fulfill family obligations.

FPCU students with K-12 school age children may have difficulty finding time for family vacations. Many FPCUs offer courses continually throughout the year without breaks in the fall, spring, or summer months. Official breaks in the school year tend to be at the Thanksgiving holiday, the two weeks toward the end of December and early January, and some federal holidays such as Martin Luther King, Jr. Day. Some students choose to earn a lower grade in summer time classes by purposefully not completing assignments and missing attendance.

Undergraduate courses at the study site are five weeks long with required attendance at four of the five class meetings. Consider an FPCU student attending class once per week on Tuesday evenings for the five-week duration of the course. Further stipulate that this student has a ten-year old child who has been promised a summer vacation and that the student's course schedule does not have a summer break. Fulfilling family obligations may require the student to miss class and potentially miss submitting assignments. Many classes at FPCUs include class participation as a portion of the grade. The lost attendance and the lost points for the assignments lower the student's grade.

Students may purposefully choose to lower their grade through missed participation and assignment points. The opportunity cost of familial obligations is greater than the cost of earning a lower grade. While this student may have relatively high levels of intrinsic and extrinsic motivation, their GPA may be driven by factors not measured by the Academic Motivation Scale.

Self-Determination Theory

The Academic Motivation Scale was built upon the theoretical foundation of Self-Determination Theory (SDT) (Deci & Ryan, 1985a). SDT describes behavior that is intrinsically motivated, extrinsically motivated, or amotivated (Deci & Ryan, 1985a; Deci & Ryan, 2000; Deci et al., 1991). The students measured in this exploratory study exhibited varying degrees of each type of motivation. According to Walls (2009), "self-determination theory has been extensively studied in primary, secondary, and postsecondary educational settings, since its inception and expansion in the nineteen

seventies and eighties, as one of the predominant motivational constructs in educational psychology” (p.1). SDT holds that actions are undertaken at one’s own direction. It assumes that organismic needs are satisfied prior to engaging in an activity (Deci & Ryan, 2000). SDT may be applied to a variety of human activities including academic pursuits. SDT is appealing because it can be used in a variety of educational settings.

Measurements from the Academic Motivation Scale (AMS) presented in this study support the notion that SDT can be applied to students attending FPCUs. Given the challenges inherent in the small non-random sampling method used, more research needs to be conducted to confirm the suitability of the AMS for use with FPCU student populations. Results from research question one support the notion that behavior theorized by Self-Determination Theory holds true for FPCU students.

Consider a student attending an FPCU who studies finance because she enjoys applied mathematics. “Intrinsically motivated behaviors are engaged in for their own sake—for *the pleasure and satisfaction derived* from their performance” (Deci et al., 1991, p. 325, emphasis in original). Operationalized by the AMS, measured levels of intrinsic motivation to accomplish and intrinsic motivation to know were both higher than intrinsic motivation to experience. In this example, finance is studied for the sheer pleasure of doing so rather than because it may lead to something external, such as, better employment prospects. Studying finance because it may lead to some type of future return is an example of extrinsic motivation.

Extrinsic motivation implies action is being taken to achieve something external to the self. Actions that are extrinsically motivated “are performed not out of interest but

because they are believed *to be instrumental to some separable consequence*” (Deci et al., 1991, p. 325, emphasis in original). While extrinsic motivation implies an element of internalization, the student chooses to do something, which comes from within; the reason for that choice is external to the individual. Deci and Ryan (2000) indicate that “internalization is an active, natural process in which individuals attempt to transform socially sanctioned mores or requests into personally endorsed values and self-regulation” (Deci & Ryan, 2000, pp. 235-236). Consider that same finance student participating in a study group of like-minded students seeking better grades that they perceive are instrumental to obtaining higher future earnings.

Higher grades are identified as a means to higher potential earnings after graduation. When students identify “with the value of an activity, internalization will be fuller” (Deci & Ryan, 2000, p. 237) and the extrinsic motivation becomes more internalized. Aggregate measures of extrinsic motivation in this study were higher than aggregate intrinsic motivation. It appears FPCU students may be more motivated by extrinsic factors than intrinsic factors. The study group could be more extrinsically motivated due to the increased internalization of that external outcome.

Amotivation is demonstrated by that same finance student, still studying finance, yet not knowing why (Deci et al., 1991). Amotivation is “the absence of intrinsic or extrinsic motivation” (Vallerand et al., 1992, p. 206). When asked what drives them, an amotivated finance student may say something like, “I don’t know why I’m studying finance,” or “I don’t know why I’m in school.” Students in this sample displayed low levels of amotivation as compared to intrinsic motivation and extrinsic motivation. The

findings support self-determination theory's applicability to for-profit student populations.

Significance of Study

FPCUs tend not to engage in outside research. Two of the FPCUs invited to participate in this study declined as a matter of policy stating that they do not engage in any outside research. Others declined due to a lack of internal resources available to assist with the study. Simply gaining access to students in this relatively uninvestigated student population is an achievement. This study offers a glimpse into the academic motivation of previously undescribed FPCU student populations. Within the context of Self-Determination Theory, given the limitations of the small sample size and convenience sampling method, the study revealed that FPCU students have higher aggregate levels of extrinsic motivation than intrinsic motivation.

Higher levels of extrinsic motivation point toward the notion that separable outcomes such as, earning more money, getting a promotion at work, or improving one's position in the job market, are the the most prevalent factors driving academic motivation. Understanding the factors affecting academic motivation have important implication for faculty, administrators, and policy makers.

Implications for Practice

The academic motivation of FPCU students in this sample appears to drive them toward achieving some separable outcome resulting from their education. FPCU faculty

should consider being mindful that students may want more of a direct connection between course material and how it will benefit them when it is applied to achieving a career goal or other separable outcome. Relatively higher measured levels of extrinsic motivation indicates students are engaged in academic endeavors for the benefits received as a result of their education not just for the sake of the knowledge itself. Course material, activities, and assignments may have greater efficacy if they are tied closely with student's career goals. The possible connection between the applicability of course materials to a student's career may have important implications for higher education administrators.

Higher measured levels of extrinsic motivation for FPCU students may affect how FPCU administrators envision degree programs and educational offerings. For example, liberal arts degrees are typically not offered at FPCUs. "For-profit universities rarely compete directly with liberal arts colleges or research universities. Their typical student is older, part-time, often employed and intent on acquiring the skills to qualify for a higher-paying job" (Bok, 2013, p. 13). While some courses associated with a liberal arts education may be offered at FPCUs as part of their general education efforts, degree programs with direct applicability to students achieving career goals, or some other separable outcomes, may have greater salience with students than do degrees in philosophy or literature. Relatively lower levels of measured amotivation support the notion of students being career driven.

Amotivation is the absence of intrinsic or extrinsic motivation (Vallerand et al., 1992). Students measured in this study exhibited lower levels of amotivation implying students knew why they were enrolled. Coupled with relatively high measured levels of extrinsic motivation, low levels of amotivation may lead administrators and institutions to focus on providing career relevant degree programs. Add to this low measured levels of intrinsic motivation to experience (college) (IMTE), the three taken in combination may support the idea of keeping extracurricular offerings to a minimum, or not offering any at all. Low levels of amotivation imply students know why they are in school. Higher levels of extrinsic motivation indicate academic endeavors are undertaken in service of furthering career goals or some other separable outcome. Relatively lower levels of IMTE show students are less interested in the college experience than they are interested in achieving a career goal. Just as administrators and institutions may be well served by offering career relevant curriculum, policy makers should be cognizant of this relationship as well.

FPCU face several policy makers at various levels of government plus regional and programmatic accreditation. Knowing that FPCU students tend to be career oriented could affect how state and federal policies that affect these institutions are created and enforced. The gainful employment rule (Education., 2014; Hentschke & Parry, 2015) created by the federal Department of Education (DoE) is one such effort.

The gainful employment rules create measures designed to hold FPCUs accountable for the student loan default rates and employment rates of their graduates.

Gainful employment rules only apply to FPCUs and other for-profit postsecondary trade schools. If 30% or more of a trade school's or FPCU's graduates default on their student loans for three consecutive years, or, if the median incomes of their graduates fail to meet financial thresholds, those institutions could be subject to financial penalties plus a revocation of their ability to process Title IV funding. Loss of Title IV funding would most likely be fatal to an FPCU as was the case with Corinthian Colleges in 2015 (Blumenstyk et al., 2015). The results of this study may support policy maker's focus on driving FPCUs even further toward focusing on student career goals.

Evidence from the measured levels of amotivation, extrinsic motivation, and IMTE in this study indicate students may have a strong focus on achieving career goals. The DoE's guidance in their gainful employment rules aligns with the career focus of the FPCU students in this sample. Students with a strong career focus may have implications for regional and programmatic accreditation bodies.

Regional accreditation bodies, such as the Higher Learning Commission and the Southern Association of Colleges and Schools Commission on Colleges, periodically review FPCUs, and many public and non-profit postsecondary institutions, for adherence to their accreditation criteria. Certain degree programs, such as those in the health sciences, have programmatic accreditation requirements in addition to regional accreditation obligations. Knowledge that FPCU students display strong connections to career goals may inform the practice of regional and programmatic accreditors. While regional accreditors review the institution as a whole, programmatic accreditors focus on

individual degree programs, some of which lead to professional licensure. Some programmatic bodies, like those in the health sciences, have rigorous professional and ethical standards for practice within their particular field. Given that FPCU students appear to be career focused, programmatic accreditation aligns with student's educational attainment goals.

The results discovered in this study indicate that FPCU should continue to focus on degree programs that further student's career goals. Students exhibit relatively high levels of extrinsic motivation and low levels of amotivation. Low scores for amotivation implies students know why they are in school. They are less motivated by the "college experience," thus reducing the need for extracurricular activities and programs designed to create connections to the university.

Future Research

FPCUs tend to be opaque. Several FPCUs contacted for this study declined to participate indicating that, as matter of policy, they do not participate in outside research. FPCUs are scrutinized by a variety of local, state, federal regulators, plus numerous nonprofit private accrediting bodies. FPCUs that offer professional programs, such as nursing, also must comply with additional academic and professional accreditation organizations. The FPCUs contacted to participate were acutely sensitive to the possibility of the study's results reflecting negatively on their organizations. Their

general reluctance to participate in outside research could create barriers to further studies. While this study was quantitative, future research efforts may have an easier time gaining access to FPCU student populations by using a variety of research methods.

Qualitative researchers may find they have easier access to FPCU students due to relatively small sample sizes need to conduct a study. Utilizing focus groups, or other interview techniques, would reduce the number of subjects needed. It might be easier for qualitative studies to access various student communities, such as African Americans, or Latinos. It is possible that the qualitative studies could narrow their focus even further by subdividing those groups by gender. While the FPCUs contacted for this study were not interested in research questions dealing with race or gender, that might not be true for studies using a qualitative research design. Qualitative designs might be enhanced by using a mixed methods approach.

Publicly available information, such as data capture by the Integrated Postsecondary Education Data System (IPEDS), may be used to discover areas for FPCU research. Researchers might find relevant data that could guide qualitative or quantitative investigations in FPCUs. IPEDS data and data held by other government may allow for quantitative studies to executed.

The Department of Defense (DoD) and the Department of Education (DoE) keep student information that could be accessed by researchers. Rather than seeking permission from FPCUs to study their students, researchers could conduct joint research with the DoD or DoE. Subject to the same strict protections needed to conduct research with human subjects, research questions relevant to those agencies could be investigated, including those using the Academic Motivation Scale (AMS).

Knowledge that the AMS appears to be appropriate for use with students at FPCUs may lead to further studies where FPCUs might be more willing to participate and could make random sampling a possibility. A larger random sample may increase the possibility of normally distributed data which may, or may not, reveal correlations between age and the academic motivation subscales, or academic motivation and GPA. A larger random sample may provide more robust confirmation that the AMS is appropriate for use with FPCU students. While age is not correlated with academic motivation in this sample, other personal and demographic characteristics might be.

Compared to traditional colleges and universities, FPCUs attract a higher percentage of African-Americans students, more females students, and have a higher percentage of minority faculty (University of Phoenix, 2011). Relationships among academic motivation, race, gender, and faculty demographics have not been explored thoroughly for FPCUs. Future studies that incorporate possible difference in academic motivation by race, gender, and faculty composition may yield results describing possible differences in academic motivation relative to those demographic characteristics. Other populations of interest are military students who are on active duty or are veterans.

Active duty member of the Department of Defense and veterans can use their tuition benefits at FPCUs (Smith, 2015). Military and former military students may have significantly different levels of academic motivation from their non-military peers. Military experiences may affect levels of extrinsic, intrinsic, and amotivation. Consider a student who is a veteran of the 2003 war in Iraq.

Some veterans returning from war have post-traumatic stress disorder (PTSD). There may be a relationship between PTSD and academic motivation. Studies assessing PTSD and academic motivation may reveal insights into military students attending FPCUs. Some veterans are able to attend FPCUs via the Post 911 G.I. Bill.

The Post 911 G.I. Bill pays active duty military personnel, veterans, and some family members a stipend for attending a variety of institutions including those in higher education (Department of Veterans Affairs, 2009). Future research may include studies investigating possible relationship among academic motivation and the various types of tuition, housing allowance, and stipend benefits available to active duty and former military. Differences in academic motivation may exist among veterans, active duty service members, and family members eligible for Department of Defense tuition and living expense benefits.

A current meme in the popular press is that FPCU students are somehow being defrauded, or duped into attending by unscrupulous and fraudulent marketing practices (Smith, 2015). While students attending any institution of higher learning may have unmet expectations, FPCUs are regarded by some as misleading students about the benefits of attending their particular institutions. The implication is that some students might not know why they are enrolled in the university. The results presented here appear to contradict the notion of students not knowing why they are attending.

The students in this sample exhibited relatively low levels of amotivation. Students who do not know why they are attending college should have relatively higher levels of amotivation not lower. It appears the students in this sample seems to know why they are attending. This study does not investigate what those reasons are, and it does not assess whether or not their expectations are being met. Evidence that the AMS is appropriate for use with for-profit students may lead to additional studies where the AMS is used in combination with other instruments.

Fairchild, et al. (2005) used several different psychometric instruments with the AMS to test for relationships among attitudes toward work (Spence & Helmreich, 1983), failure avoidance (Hagtvet & Benson, 1997), and work preferences (Amabile et al.,

1994). The majority of for-profit students hold full-time jobs while attending class. Possible relationships among academic motivation and work related attitudes could provide valuable insight into the role FPCUs play in preparing a work force for gainful employment. This knowledge would be useful to employers, researchers, for-profit institutions of higher learning, regulators, and policy makers.

Summary

This study explored the academic motivation of degree-seeking undergraduates at a for-profit university in the United States by using a well-tested psychometric instrument. The Academic Motivation Scale (AMS) ($N = 44$) was used to measure academic motivation. The instrument has good reliability and internal consistency and appears to be appropriate for use with a for-profit student population. Subjects in this sample had statistically significantly higher levels of extrinsic motivation than intrinsic motivation or amotivation. No statistically significant relationships were found between academic motivation and student age in this convenience sample. Academic motivation does not appear to be a useful predictor of grade point average for the population sampled. The study used a non-random convenience sample because more robust sampling methods were not possible with the study site. Future studies may benefit from larger random samples where relationships among academic motivation, age, personal demographic characteristics, and GPA may be revealed. Knowledge that the AMS appears to be appropriate for use with for-profit student population may lead to additional

studies assessing possible relationship among academic motivation and race, gender, type of financial aid used, military service, and attitudes toward work.

Appendix A: Permission to use Academic Motivation Scale

From: Bob Vallerand vallerand.bob@gmail.com

Subject: Re: Demande de Permission d'AMS-28

Date: January 31, 2013 at 6:07:32 AM CST

To: John Carroll john.carroll@utexas.edu

Aucun problème, John

Bonne chance avec ta recherche!

RJV

--

Robert J. Vallerand, Ph.D., FRSC
President,
International Positive Psychology Association
www.ippanetwork.org
Professeur et Directeur,
Laboratoire de Recherche sur le Comportement Social
Département de Psychologie
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Tel: (514) 987-4836
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www.er.uqam.ca/nobel/r26710/LRCS/

2013/1/30 John Carroll john.carroll@utexas.edu:
Professeur Robert J. Vallerand, Ph.D.
Département de psychologie
Laboratoire de recherche sur le comportement social (LRCS)
Université du Québec
Montréal C.P. 888
Succursale Centre-Ville Montréal (Québec)
Canada H3C 3P8

Dear Professor Vallerand,

Je vous écris pour demander la permission d'utiliser votre balance de motivation scolaire (AMS-28) comme un instrument de mesure pour ma thèse. Je suis un étudiant au doctorat à étudier l'administration de l'enseignement supérieur à l'Université du Texas, à Austin. J'ai l'intention d'enquêter sur les différences, le cas échéant, existant entre la motivation scolaire des élèves qui poursuivent des associés, baccalauréat, maîtrise et doctorat à but lucratif collèges et universités aux États-Unis. Je voudrais utiliser votre échelle de motivation académique pour tester les différences entre ces groupes.

Merci pour votre temps et considération.

Cordialement,

John Carroll

Doctorant
Université du Texas, à Austin

Professeur Robert J. Vallerand, Ph.D.
Département de psychologie
Laboratoire de recherche sur le comportement social (LRCS)
Université du Québec à Montréal
C.P. 888, Succursale Centre-Ville
Montréal (Québec) Canada H3C 3P8

Dear Professor Vallerand,

I am writing to seek permission to use your Academic Motivation Scale (AMS-28) as a measurement instrument for my dissertation. I am a doctoral student studying Higher Education Administration at the University of Texas, at Austin. I intend to investigate what differences, if any, exist among the academic motivation of students pursuing associates, baccalaureate, masters, and doctoral degrees at for-profit colleges and universities in the United States. I would like to use your academic motivation scale to test for differences among these groups.

Thank you for your time and consideration.

Sincerely,
John Carroll
Doctoral Student
University of Texas, at Austin

--

Robert J. Vallerand, Ph.D., FRSC

President,
International Positive Psychology Association
www.ippanetwork.org
Professeur et Directeur,
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Appendix B: Faculty Communication

LETTER TO THE FACULTY

The following Letter to the Faculty was forwarded by local Dean to faculty currently teaching undergraduate classes at each of the study locations.

Dear Esteemed Faculty,

I am a faculty member at (university name here) and a doctoral candidate at the University of Texas at Austin. I am studying the academic motivation of undergraduate students attending for-profit universities in the United States and would like your assistance with my dissertation study. Please post the message and the link shown below in your current class and kindly make an announcement in the workshop indicating the survey's presence.

Please let the student's know that their participation is voluntary and will not affect their grade in your class nor will it affect their relationship with University of Phoenix in anyway. Please feel free to contact me with any questions you may have. I can be reached via email at john.carroll@utexas.edu or via telephone at 1-512-337-9722.

Thank you for your time, consideration, and assistance.

Sincerely,

John Carroll

MESSAGE TO STUDENTS POSTED IN EACH ELECTRONIC CLASSROOM

Hello,

You are invited to take a brief survey investigating the academic motivation of undergraduate students at for-profit universities. The survey will take about ten minutes of your time and will help me complete my dissertation.

Your participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time. Participation or withdrawal will not affect your grade or your relationship with (name of study site) in anyway.

On the survey site you will be asked to provide Informed Consent to Participate prior to taking the survey. Your participation is voluntary and your responses are anonymous.

Please click on the “Next” button below to begin the survey.

Appendix C: The Academic Motivation Scale

ACADEMIC MOTIVATION SCALE (AMS-C 28)

COLLEGE (CEGEP) VERSION

*Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière,
Caroline B. Senécal, Évelyne F. Vallières, 1992-1993*

Educational and Psychological Measurement, vols. 52 and 53

Scale Description

This scale assesses the same 7 constructs as the Motivation scale toward College (CEGEP) studies. It contains 28 items assessed on a 7-point scale.

References

Vallerand, R.J., Blais, M.R., Brière, N.M., & Pelletier, L.G. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME). *Revue canadienne des sciences du comportement*, 21, 323-349.

WHY DO YOU GO TO COLLEGE (CEGEP) ?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college (CEGEP).

WHY DO YOU GO TO COLLEGE (CEGEP) ?

<i>Does not correspond at all</i>	<i>Corresponds a little</i>	<i>Corresponds Moderately</i>	<i>Corresponds a lot</i>	<i>Correspond Exactly</i>							
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>					
1. Because with only a high-school degree I would not find a high-paying job later on.					1	2	3	4	5	6	7
2. Because I experience pleasure and satisfaction while learning new things.					1	2	3	4	5	6	7
3. Because I think that a college (CEGEP) education will help me better prepare for the career I have chosen.					1	2	3	4	5	6	7
4. For the intense feelings I experience when I am communicating my own ideas to others.					1	2	3	4	5	6	7
5. Honestly, I don't know; I really feel that I am wasting my time in school.					1	2	3	4	5	6	7
6. For the pleasure I experience while surpassing myself in my studies.					1	2	3	4	5	6	7
7. To prove to myself that I am capable of completing my college (CEGEP) degree.					1	2	3	4	5	6	7
8. In order to obtain a more prestigious job later on.					1	2	3	4	5	6	7
9. For the pleasure I experience when I discover new things never seen before.					1	2	3	4	5	6	7
10. Because eventually it will enable me to enter the job market in a field that I like.					1	2	3	4	5	6	7
11. For the pleasure that I experience when I read interesting authors.					1	2	3	4	5	6	7
12. I once had good reasons for going to college however, now I wonder whether I should continue.					1	2	3	4	5	6	7
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.					1	2	3	4	5	6	7
14. Because of the fact that when I succeed in college I feel important.					1	2	3	4	5	6	7
15. Because I want to have "the good life" later on.					1	2	3	4	5	6	7

<i>Does not correspond at all</i>	<i>Corresponds a little</i>	<i>Corresponds Moderately</i>	<i>Corresponds a lot</i>	<i>Correspond Exactly</i>		
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>

WHY DO YOU GO TO COLLEGE (CEGEP) ?

16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	1	2	3	4	5	6	7
17. Because this will help me make a better choice regarding my career orientation.	1	2	3	4	5	6	7
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	1	2	3	4	5	6	7
19. I can't see why I go to college (CEGEP) and frankly, I couldn't care less.	1	2	3	4	5	6	7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	1	2	3	4	5	6	7
21. To show myself that I am an intelligent person.	1	2	3	4	5	6	7
22. In order to have a better salary later on.	1	2	3	4	5	6	7
23. Because my studies allow me to continue to learn about many things that interest me.	1	2	3	4	5	6	7
24. Because I believe that a few additional years of education will improve my competence as a worker.	1	2	3	4	5	6	7
25. For the "high" feeling that I experience while reading about various interesting subjects.	1	2	3	4	5	6	7
26. I don't know; I can't understand what I am doing in school.	1	2	3	4	5	6	7
27. Because college (CEGEP) allows me to experience a personal satisfaction in my quest for excellence in my studies.	1	2	3	4	5	6	7
28. Because I want to show myself that I can succeed in my studies.	1	2	3	4	5	6	7

© *Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière, Caroline B. Senécal, Évelyne F. Vallières, 1992*

KEY FOR AMS-28

- # 2, 9, 16, 23 **Intrinsic motivation - to know**
- # 6, 13, 20, 27 **Intrinsic motivation - toward accomplishment**
- # 4, 11, 18, 25 **Intrinsic motivation - to experience stimulation**
- # 3, 10, 17, 24 **Extrinsic motivation - identified**
- # 7, 14, 21, 28 **Extrinsic motivation - introjected**
- # 1, 8, 15, 22 **Extrinsic motivation - external regulation**
- # 5, 12, 19, 26 **Amotivation**

Appendix D: Personal Data Questionnaire

Please complete the following anonymous questionnaire that gathers demographic information.

What is your grade point average (GPA)? _____

What is your age? _____

Appendix E: Informed Consent

Consent for Participation in Research

The survey instrument and personal data questionnaire for this study will be administered via the online survey tool hosted on SurveyGizmo.

Title: Student Academic Motivation at For-Profit Colleges and Universities: A Self-Determination Theory Study

Introduction

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. The person performing the research will answer any of your questions. Read the information below and ask any questions you might have before deciding whether or not to take part. If you decide to be involved in this study, this form will be used to record your consent.

Purpose of the Study

You have been asked to participate in a research study about the academic motivation of students attending for-profit colleges and universities. The purpose of this study is better understand what motivates student's academic endeavors.

What will you to be asked to do?

If you agree to participate in this study, you will be asked to

- Complete an online survey where you will indicate to what degree to agree or disagree with 28 separate statements concerning your academic motivation.
- Complete a personal data questionnaire that anonymously gathers information about your age and grade point average (GPA).

What are the risks involved in this study?

There are no foreseeable risks to participating in this study.

What are the possible benefits of this study?

You will receive no direct benefit from participating in this study; however, your participation may help researchers and policy makers better understand the academic motivation of students attending for-profit colleges and universities.

Do you have to participate?

No, your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with The University of Texas at Austin (University) in anyway.

If you would like to participate, please click the "I Consent" button below. You will receive a copy of this form.

Will there be any compensation?

You will not receive any type of payment participating in this study.

How will your privacy and confidentiality be protected if you participate in this research study?

Your privacy and the confidentiality of your data will be protected by the institution you are attending. This solicitation e-mail was blind carbon copied (bcc) to you. _____ University will not keep of record of this solicitation.

Your responses to the survey and the personal data questionnaire are anonymous.

Whom to contact with questions about the study?

Prior, during or after your participation you can contact the researcher **John W. Carroll** at **512-344-1421** or send an email to **john.carroll@utexas.edu** for any questions or if you feel that you have been harmed.

Whom to contact with questions concerning your rights as a research participant?

For questions about your rights or any dissatisfaction with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or email at **orsc@uts.cc.utexas.edu**.

Participation

If you agree to participate click the “I Consent” button at the bottom of this page.

Signature

You have been informed about this study’s purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

Printed Name

Signature

Date

As a representative of this study, I have explained the purpose, procedures, benefits, and the risks involved in this research study.

Print Name of Person obtaining consent

Signature of Person obtaining consent

Date

Appendix F: Data

ROW	IMTK	IMTA	IMTE	EMID	EMIN	EMER	AM	IM	EM	GPA	Age
1	23	27	19	28	23	27	4	69	78	3.00	39
2	19	22	14	25	23	22	4	55	70	3.43	34
3	28	27	17	26	21	25	4	72	72	2.20	41
4	26	25	12	28	28	28	4	63	84	3.00	26
5	23	22	21	24	22	23	23	66	69	3.10	50
6	27	28	18	24	23	27	4	73	74	3.78	49
7	23	28	19	27	28	28	4	70	83	3.53	43
8	28	26	24	26	28	25	5	78	79	2.80	29
9	28	28	28	28	28	28	4	84	84	3.89	30
10	26	25	23	28	26	28	4	74	82	3.63	29
11	28	22	22	28	28	28	4	72	84	3.89	41
12	21	23	9	24	24	24	6	53	72	3.12	25
13	24	25	19	27	26	24	4	68	77	3.20	28
14	17	7	8	19	5	23	4	32	47	3.06	38
15	20	19	18	20	19	19	4	57	58	2.72	34
16	26	28	19	25	25	22	4	73	72	3.37	52
17	8	18	7	27	18	22	4	33	67	3.50	39
18	28	27	23	26	25	27	8	78	78	3.50	39
19	17	7	10	28	4	28	4	34	60	3.62	49
20	15	14	9	11	10	7	9	38	28	3.50	27
21	23	4	8	28	4	28	4	35	60	2.75	35
22	17	14	16	13	11	27	5	47	51	4.00	26
23	24	27	23	24	28	27	4	74	79	3.40	51
24	21	21	10	18	14	19	7	52	51	3.87	31
25	21	22	18	24	28	24	4	61	76	4.00	28
26	27	26	16	21	22	27	4	69	70	3.55	38
27	24	22	6	19	21	24	4	52	64	3.00	33
28	18	15	13	10	5	5	4	46	20	3.00	58
29	18	19	11	27	25	28	4	48	80	3.67	23
30	17	18	14	27	23	25	4	49	75	3.84	31
31	15	18	13	21	22	21	4	46	64	3.97	53
32	28	28	18	22	20	22	4	74	64	3.05	37
33	24	25	25	27	28	27	4	74	82	2.52	34
34	27	26	23	26	28	22	4	76	76	3.82	51
35	27	27	16	27	27	27	4	70	81	3.46	28
36	28	28	25	28	25	28	7	81	81	3.20	30

37	20	22	20	22	22	23	4	62	67	2.80	34
38	21	20	13	25	26	24	5	54	75	3.40	28
39	25	23	19	28	24	22	4	67	74	3.41	47
40	25	15	16	27	25	20	15	56	72	2.47	42
41	14	15	13	17	14	18	9	42	49	3.67	25
42	26	28	15	28	28	28	5	69	84	3.53	54
43	28	28	22	26	28	28	4	78	82	3.00	51
44	28	28	20	28	28	28	13	76	84	3.50	39

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