

ACADEMIC ACHIEVEMENT MOTIVATION, SELF-EFFICACY, &
ACADEMIC AND CAREER SUCCESS

By

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Abstract

The goal of this study is to investigate university students' Academic Achievement Motivation and Self-Efficacy to better understand its relationship to long-term Academic and Career Success. In addition to a literature review, this project consists of a research study proposal entailing a methodology section, data analysis plan, expected/hypothetical results (no data was collected, mock data was used), and a discussion. The literature review will summarize recent research on Academic Achievement Motivation and Self-Efficacy's role in academic achievement, graduation rates, and post-graduate employment rates to better explore the relationship between Self-Efficacy and long-term academic/career goals. The implication of this research is to shed light on the importance of a student's perceived Self-Efficacy and its importance in college so that universities can implement methods to allow students to be more self-efficacious and thereby make students more successful. Lastly, limitations of the study and directions for future research are discussed.

Keywords: achievement motivation, self-efficacy, academic success, college students

Introduction

Student retention rates are one of the biggest problems facing universities and America's higher education today. Thirty percent of first-year students drop out of college and only 59% of students graduate college by the end of their college years (College Atlas 2018). Also, over the course of the freshman year, when faced with challenging courses or classes that not useful, student's confidence to do well in those classes, such as college chemistry or calculus, significantly decreases (Pintrich & Schunk 2002). In fact, undergraduate students become very preoccupied with 'grade point perspective' and as a result, become more grade-orientated and less learning-orientated over time (Kowalski 2007). This predominant trend of decreasing motivation for freshman college students as the school year progresses is a serious problem for educational psychologists today. A question remains: Are American universities able to use current psychological research on motivation and college success to implement programs and course guidelines that enable students to be more driven to reach their goals? This study will investigate the extensively researched psychological constructs of academic achievement motivation, academic success, and self-efficacy to try to answer this dilemma.

Humans have an innate need for autonomy in their lives and naturally want to be successful. They are able to obtain their personal goals of success through a personal ambition called motivation. Motivation is an essential driving force that allows humans to be successful, pursue their goals, and seek the necessities of daily life. Motivation can be defined as the drive to excel and achieve goals and the process of maintaining this drive for success (Pintrich & Schunk, 2005). The term motivation comes from the Latin word *motivus*, meaning "that which puts into movement" indicating a dynamic, forward-moving process of human behavior (Maslow 1954). The concept of motivation has also been incorporated into theories of personality. For instance,

in 1938, Henry Murray developed a personality theory of humans based on three essential motives humans have: achievement, power, and intimacy. He defined the need for achievement as a need to “accomplish something difficult; to overcome obstacles and attain a high standard; to excel oneself; to rival and surpass others” (1938). In the 1960’s, the Harvard psychologist, David McClelland followed Henry Murray’s footsteps on motivation and continued his work by significantly contributing to the research of human motivation. He then developed the theory of achievement motivation to describe how humans are motivated to achieve specific, attainable goals, seek progress, and excel in their career. It was created as “an attempt to predict and explain the behavior and performance of an individual based on their need for achievement, power, and affiliation” (Lussier & Achua 2007). These three elements of human’s basic desires, achievement, intimacy, and autonomy continued to persist in the psychological research of human motivation. In the 1980’s, another framework of motivation was proposed called Self-Determination Theory. Psychologists Ryan and Deci strived to propose a theory that would explain the human need for self-fulfillment and personal improvement. Similar to their predecessors, they identified three innate human needs, which are a person’s experience of autonomy, relatedness, and competence (Ryan & Deci 2000). For a person to have a high level of motivation it is necessary for the individual to feel competent and autonomous. Human motivation is essential for every kind of contexts and disciplines in life, but how important is motivation in the lives of university students?

It is well known that motivation is one of the most important prerequisites to academic success. College is a critical period of self-growth and independence for young adults, and during this formative time students must learn to create good habits, healthy interpersonal relationships, and be productive in their management of time. Academic motivation enables

students to strive towards an ideal career or educational goal so that they can become fulfilled in life. College students' top four reasons for attending school are: to improve oneself and become educated, to accomplish a personal goal, to get a career, and to fulfill family expectations (Kennet et al. 2011). Having been extensively studied, motivation as a variable can be just as influential if not more so than a high IQ for achieving academic goals. For instance, one German longitudinal study studying six annual waves of data found that good study habits and self-confidence was more predictive of higher math scores than intelligence (Murayama et al., 2012). Furthermore, another study testing student's performance on exams discovered that self-confidence can predict college chemistry scores almost twice as much as SAT scores (Zusho et al. 2003). Self-confidence and other self-regulatory learning strategies such as self-efficacy beliefs are crucial for an individual's ability to thrive academically. Therefore, motivation and other factors which directly affect achievement do in fact play a large role in a student's educational journey.

While academic motivation is the desire to achieve personal goals and to excel, self-regulation is the strategies and methods students can take to improve their own learning. Self-regulation includes both self-directed processes and personal beliefs which allow students to convert mental effort into personal achievement (Zimmerman 2008). Intelligence & motivation are not the only keys to academic success; it has a lot to do with a person's time management, studying habits, self-reflection, and other learning strategies. Albert Bandura viewed self-regulation as a process by which humans can exercise influence over their own motivation, emotions, thinking processes, and habits (1991). Self-regulatory learning is a proactive process which includes various strategies that students take to study well such as teamwork, seeking help, managing time, and self-evaluation. Other learning strategies includes self-monitoring,

environment structuring, record keeping, etc. and all fourteen of these different types of self-regulated learning techniques were found to be significant and linked to academic performance (Zimmerman & Pons 1986). In fact, researchers are able to use data on student's self-regulation behaviors and predict their placement in advanced level classes with 93% accuracy (Chalarut 2001). Higher performing students exhibited greater use of self-regulatory strategies than students that were not as successful. These high-achieving students could be observed and identified based on their level of interest in the class, knowing how tests would be graded, their relative amount of preparation, and their punctual completion of their coursework. But psychologists today are interested in another even more robust variable that can be used to predict academic performance.

One of the strongest factors used in the study of motivation and academic success is a type of belief in self-regulatory learning called self-efficacy. In over 100 empirical studies analyzed over the past 20 years, researchers found that out of nine well-defined, highly studied psychological constructs, academic self-efficacy was the strongest variable in predicting college student academic achievement (Robbins et al. 2004). It is also a strong predictor for academic involvement and healthy behaviors (smoking cessation, etc.) (Zajacova, Lynch, & Espenshade, 2005; Dehyadegary et al. 2014). The renowned social psychologist, Bandura defines it as "an individual's belief in his or her own ability to organize and implement action to produce the desired achievements and results" (1997). So, while academic motivation is the process of actively seeking to accomplish academic goals, and self-regulation is the more specific strategies that help students organize and finish their duties, self-efficacy is the internal belief that students have regarding their capacity to do well and excel in an academic context. Self-efficacy involves a positive expectation of one's self in future tasks, thus it is a future-oriented process needed to

produce a particular outcome (Bandura 1982). In fact, self-beliefs predict a large range of outcomes across numerous multiple different contexts and domains in life (Marsh, 2007).

Psychological research has shown that self-efficacy was positively correlated with correlated with graduation rates, employment rates, job satisfaction, adaptation to life transition, stress management, and persistence in college.

Today, college enrollment rates in the U.S. are gradually rising yet poor academic performance and high drop-out rates continue to be serious issues for undergraduate students. (Lloyd, Tienda, and Zajacova, 2001; Tinto, 1994). Knowing that self-efficacy has a significant and strong role in personal achievement, this study aims to investigate if motivation and self-efficacy predict long-term term goals, such as better academic standing, success in graduating college, and higher rates of employment. The study also predicts positive correlations among Academic Motivation, Self-Efficacy, and long-term Academic and Career Success. More specifically, it is predicted that 1) Students with higher Academic Motivation exert more effort studying/practicing for exams and, therefore should be demonstrate higher Self-Efficacy; 2) Individuals who report higher levels of motivation and higher levels of Self-Efficacy will be more likely to attain long-term academic and career goals, including: better academic standing, success graduating college, and higher rates of employment.

On top of these straightforward predictions, other secondary questions remain that the current study will investigate. For example, is high motivation a prerequisite for high Self-Efficacy or can students feel unmotivated to do well in school and still feel very competent in their own abilities? Additionally, how well does academic Self-Efficacy and the capability to obtain strong grades on exams translate to life skills needed for success in the real world?

Discovering evidence to answer such questions would more clearly bring to light the relationships between each of the three core variables being studied in this research paper.

This study presents a unique take on the importance of self-efficacy beliefs and Academic and Career Success and intends to examine long term goals that continue past academic achievement. Furthermore, the field of Self-Efficacy and Academic & Career Success is absolutely vital for the improvement of University student retention rates. Devonport and Lane discovered that Self-Efficacy assessments taken by first-year undergraduate students could predict 81.3% of the students who withdrew (2006). Additionally, students who subsequently withdrew reported much lower Self-efficacy scores in their ability to be resourceful, work effectively in lectures, work well in groups, and manage time (Devonport & Lane, 2006). However, student resources at universities and community colleges can seek to improve student Self-Efficacy such as through social support so that students can better persist in their classes, improve their academic planning, and strengthen their academic beliefs.

Methods

Participants

My theoretical longitudinal study will include N=100 randomly selected undergraduate freshman college participants from the University of Arizona, located in a large southern Arizona city, Tucson.

Procedure

This longitudinal study will last for five years with five waves of data collection. Participants' academic Self-Efficacy, Academic Achievement Motivation, and life goals will be measured through self-report while their Academic Achievement (GPA) will be asked for. This study will span for the entire four years of the college career and one year following graduation. Participants will be asked to complete online surveys at the beginning of their freshman year, as

a sophomore, as a junior, as a senior, and a year afterwards. Students who graduate in three years or more than four years will still be included for data collection. Also, freshman students will provide their high school GPA as well as a prediction of how well they will do in their two semesters alongside the rest of the questionnaire.

Measures

Academic Achievement Motivation:

The Academic Motivation Scale – College version (AMS-C28; Vallerand et al., 1992) is very commonly used instrument to measure the motivation of college students. This measure consists of a seven-point Likert scale with 28 items and a high level of internal and external reliability (Wilson et al. 2012). One sample item is: “I go to college because I think that a college education will better prepare me for the career I have chosen.” A value of 1 on the AMS scale means that the item does not correspond at all while a 7 on the scale means that the item corresponds ‘exactly so’ (which is more than a lot). Additionally, the AMS scale is based on Ryan and Deci’s self-determination theory (SDT), as a result seven subscales of motivation will be measured including three types of intrinsic motivation, three types of extrinsic motivation, and amotivation (Utvær & Haugan 2016). There are four items for each of the seven different sub variables of academic motivation and a higher score on the Likert scale corresponds to a higher self-reported amount of that particular type of motivation, shown below in Figure 1.

Figure 1. The various types of motivation in SDT.

Amotivation	Extrinsic motivation				Intrinsic motivation
<i>Non Regulation</i>	<i>External Regulation</i>	<i>Introjected Regulation</i>	<i>Identified Regulation</i>	<i>Integrated Regulation</i>	<i>Intrinsic Regulation</i>
Least self-determined	←————→				Most self-determined
Amotivation = lack of motivation	Controlled motivation = low-quality motivation		Autonomous motivation = high-quality motivation		

Figure 1. The types of motivation and regulation within SDT. Source: Adapted from Deci and Ryan (2008), and Ryan and Deci (2009).

Academic Self Efficacy:

The General Academic Self-Efficacy (Torre, 2006) is a validated instrument tailored directly to college students and has roots in the cognitive theory of self-efficacy of Albert Bandura. Participants’ self-efficacy will be measured on a five-point Likert scale. The students rate the items anywhere between strongly disagree, neither agree nor disagree, or strongly agree. A sample item includes “I consider myself sufficiently capable of overcoming difficulties and challenges in my course.” A response of 1 on the questionnaire means the student strongly disagrees while a response of 5 means that the student strongly agrees. A higher score on the questionnaire corresponds to greater academic self-efficacy for the student.

Academic & Career Success

Academic and Career Success will be measured over time (see procedure) by surveying the student’s future plans, whether they expect to graduate or not, whether or not they plan on going to graduate school or go into the workforce, and how well they fulfill these academic goals. In this study, Academic and Career Success is measured by looking at academic achievement (GPA), graduation rates, graduate school acceptance rates, and postgraduate employment. For the fifth year of data collection, the survey will ask the students if they have graduated from college, if they are seeking employment, if they found employment, if they are

currently in graduate school, if they want to pursue higher education in the future, and their long-term career goals. To summarize the measurement of variables in this study, all of the following variables: Academic Achievement Motivation, Self-Efficacy, and Academic & Career Success will be gathered through self-report measures and will be measured using a five-point Likert scale. Additionally, to reiterate, the predictions of this study are that 1) College students with higher levels of Academic Achievement Motivation will display higher Self-Efficacy than college students with lower levels of Academic Achievement Motivation; 2) College students reporting higher levels of academic motivation and higher Self-Efficacy will be much more successful in obtaining long-term career goals or Academic & Career Success (college graduation, academic performance, graduate school entry, etc.) than those who report lower levels of motivation and self-efficacy.

Data Analysis Plan

Data will be analyzed using the SPSS statistical software package version 26. First, descriptive statistics will be conducted on all of the variables (i.e., means, standard deviations, histograms, etc.). These descriptive statistics will be organized in tables & graphs before moving into inferential statistical tests. In order to test out the study predictions, Pearson correlations will be performed to determine if there are any significant correlations among the variables. This will allow us to observe the strength and direction of the particular relationship, if any, between the variables. The current variables we will be examining are Academic Achievement Motivation, Self-Efficacy, academic performance (GPA), and Academic & Career Success which is composed of graduation rates, post-graduation employment, employment rates and graduate school admissions (if applicable). A correlation matrix will be generated in order to display the results. Lastly, regression analyses will be conducted to determine how well

Academic Achievement Motivation and Self-Efficacy predict one another, how Academic Achievement Motivation predicts Academic and Career Success, and how Self-Efficacy predicts Academic and Career Success.

Anticipated Results Section (Using Simulated/Mock Data)

Looking at the hypothetical results of five years of collected self-measure data, it is predicted that the data will confirm the following predictions: Academic Achievement Motivation will be strongly and positively correlated with Self-Efficacy, Academic Achievement Motivation and Self-Efficacy both will be positively correlated with Academic and Career Success, and the regression analysis will show that the combination of Academic Achievement Motivation and Self-Efficacy predicts students' Academic and Career Success. Below, simulated results are presented for both descriptive and inferential statistical tests. *Note:* These results are purely for hypothetical purposes. No actual data was collected in this study.

Descriptive Statistics (Hypothetical Results/No Data Collected)

Descriptive statistics were computed for all key study variables. The following tables below summarize the variables.

Table 1.

Descriptive Statistics for Academic Achievement Motivation (AAM), Self-Efficacy, and Academic and Career Success (A&C Success) for Freshman Undergraduates

Variable	Mean	Median	SD	Skewness
AAM	4.40	4.82	2.21	.00
Self-Efficacy	3.30	3.64	3.12	-.39
A&C Success	3.39	3.47	5.60	.25

Table 2.

Descriptive Statistics for Academic Achievement Motivation (AAM), Self-Efficacy, and Academic and Career Success (A&C Success) for Sophomore Undergraduates

Variable	Mean	Median	SD	Skewness
AAM	5.13	5.32	2.23	.13
Self-Efficacy	3.80	3.75	2.92	-.35
A&C Success	3.71	3.59	4.40	.22

Inferential Statistical Tests (Hypothetical Results, No Data Collected)

Pearson correlations were used to test out the study predictions. Results showed that there was a significant positive correlation between Academic Achievement Motivation and Self-Efficacy (Figure 1), $r = .60$, $p < .01$. Students who were more motivated to perform well in their college classes also tended to feel more self-efficacious as demonstrated by the results. The coefficient of determination (r^2) shows that 36% of the variance in student Self-Efficacy is accounted for by Academic Achievement Motivation.

Furthermore, to test for our second hypothesis, results indicated that a slight positive correlation between Academic Achievement Motivation and Academic and Career Success (Figure 2), $r = .29$, $p < .01$, and a moderate positive correlation between Self-Efficacy and Academic and Career Success (Figure 3) $r = .41$, $p < .01$. For Figure 2, the coefficient of determination (r^2) reveals that 8.41% of the variance in student Academic and Career Success is accounted for by Academic Achievement Motivation, while for Figure 3, 16.8% of the variance in Academic and Career Success was accounted for by Self-Efficacy.

Figure 1. A Mock Demonstration of a Scatterplot Between Self-Efficacy and Academic Achievement Motivation

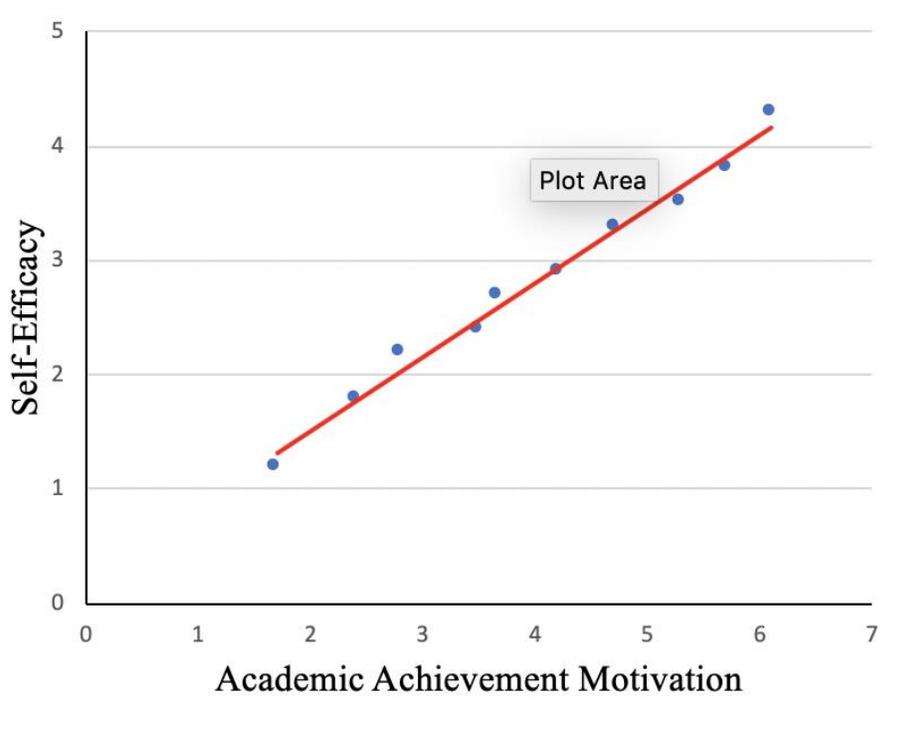


Figure 2. A Mock Demonstration of a Scatterplot Between Academic & Career Success and Academic Achievement Motivation

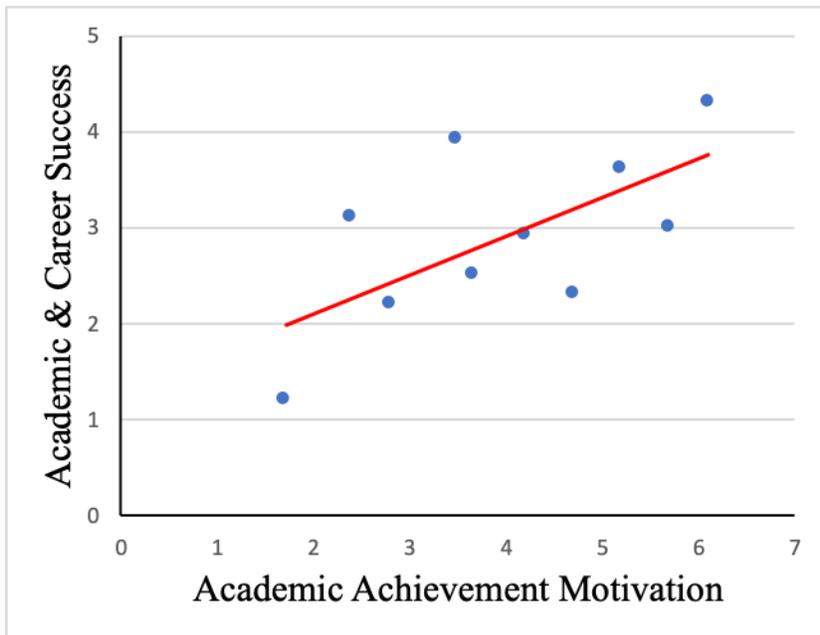
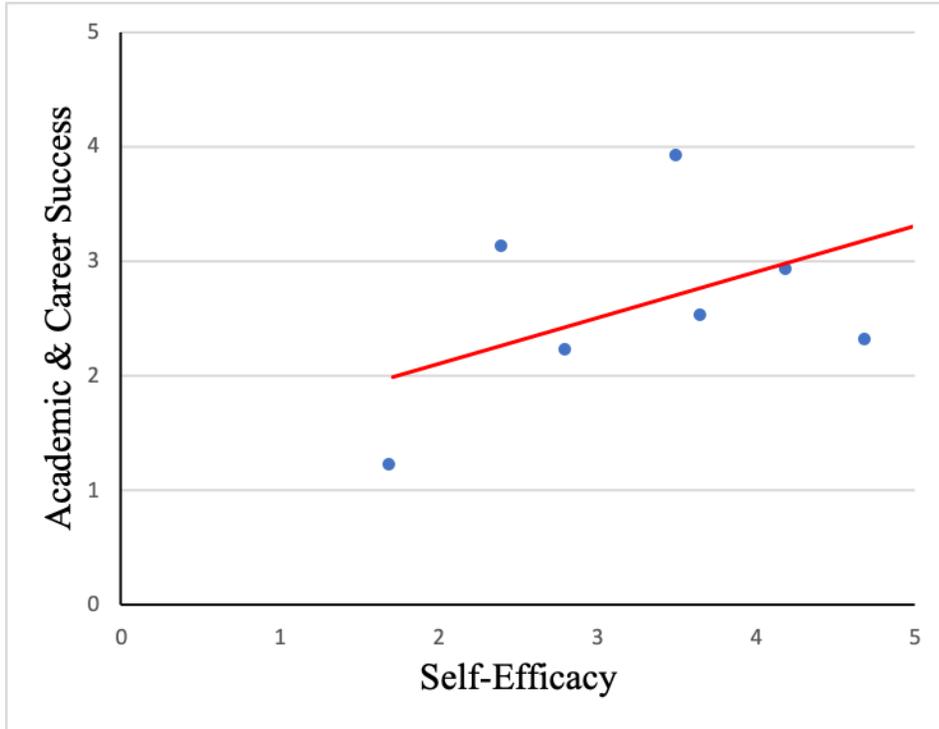


Figure 3. *A Mock Demonstration of a Scatterplot Between Academic & Career Success and Self-Efficacy*



(Note: The data presented here is hypothetical and no actual data was collected for the purpose of this study)

Discussion

As discussed earlier, college students who report feeling more motivated and more competent in their college classes are significantly more likely to not only obtain great grades, but also graduate at a much higher rate, have higher rates of graduate school acceptance, and share slightly higher levels of success of post-graduate employment compared to their less motivated counterparts. This brings an immense issue for universities to light: the need for appropriate funding and support for student resource programs that are specifically tailored to the

needs of struggling freshman and undergraduate students. Since a vast portion of first-year students drop out (30%) and less than 60% of students make it to graduation (College Atlas 2018), universities should be looking towards the improvement of student retention rates as a means of generating revenue and enriching the entirety of the student body. With college enrollment rates down 11% since 2011 (Nadworny & Larkin 2019) and current predictions for future enrollment to decrease, universities and America's higher education have a vital issue at hand. Institutions should carefully consider the importance of self-efficacy training for their students as this would provide them with a strong foundation of academic skills and habits such as time-management, goal-setting, and any other tools for success that could improve the academic motivation and the personal efficacy of their proteges.

In addition to student programs, the effective use of teachers and teaching assistants should be implemented in our course curriculum. Teacher self-efficacy and their ability to motivate students significantly affects the engagement of their students, so training teachers to be aware of their impact in the classroom is an important endeavor to consider. Additionally, student self-efficacy can be improved by allowing students to self-regulate themselves and measure their academic progress often. Therefore, teachers and teaching assistants can opt to give more frequent feedback to their students as a means to improve student self-efficacy as well. Additionally, universities can closely monitor and improve academic curriculums by including more group collaboration in their classes so that students can feel more satisfied and connected with their peers, which is vital element for feeling self-efficacious.

One advantage of this research project is that it is a longitudinal study. This will be able to provide us with an extensive and comprehensive look at all the years of data collection and will allow us to survey changes in the same group of people all throughout their college career.

Additionally, these results can be generalized very well to the general populace and other college students in the nation since they stem from a large public university in Arizona, contain a large sample size, and include a diverse background. The disadvantages of this study are that it is purely self-report and survey-based data and there can oftentimes be a discrepancy between a student's perception of their own motivation and their actual motivation in comparison to their peers. Furthermore, GPA is not the only measurement of academic achievement and the variables we are using to measure Academic and Career Success are slightly different in scope, yet all are related enough to be an appropriate measure of long-term student success. Future directions in this research includes whether the results and findings of this study can be replicated by researchers in other university campuses and whether the trends and results discovered still apply in cross-cultural studies of Academic Achievement Motivation, Self-Efficacy, and Academic & Career Success.

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