The Effects of Student Financial Contributions Toward Their Post-Secondary Educational Experience

by

Eva Marie Kane

A dissertation submitted to the Graduate Faculty of
Auburn University
in partial fulfillment of the
requirements for the Degree of
Doctor of Philosophy

Auburn, Alabama
August 1, 2015

Keywords: motivation, student financial contribution, and post-secondary education

Approved by

Jill Salisbury-Glennon, Chair, Associate Professor of Educational Foundations, Leadership and Technology
Maria Witte, Professor of Educational Foundations, Leadership and Technology
Paris Strom, Professor of Educational Foundations, Leadership and Technology
Margaret Ross, Professor of Educational Foundations, Leadership and Technology

Abstract

The college student population is predicted to increase from 13 million to 21 million between 2003–2015 (Strom, 2004). This increase along with the exponentially increasing cost of post-secondary education has caused an increase in the financial burden placed on students. Between 2000 and 2012, the two major post-secondary institutions in the Southeastern state where the study was conducted has raised their tuition rates almost 200 percent (Bennett & Wilezol, 2013). The present study used a quantitative approach to determine the relationship between student's financial contributions and student motivation, cognitive learning strategies, and metacognitive self-regulation. These sections were broken into eight subcategories drawn from the Motivated Strategies of Learning Questionnaire (MSLQ). Student financial contribution was determined by students' personal contributions (loans, scholarships, full and part-time work, and student savings) toward tuition, fees, books, housing, and transportation. The survey was distributed using the College of Education listserv through the Office of Institutional Research and Assessment. Students were sent an initial e-mail requesting participation followed by two subsequent reminder e-mails. Only students who were over the age of 19 enrolled in the College of Education were used in this study. Multiple simple regressions were used to find a positive statistical relationship between the variables. This study found that there is a significant statistical relationship between student financial contribution and intrinsic goal orientation and elaboration. Follow-up hierarchical multiple regressions were run to determine the extent to which intrinsic goal orientation and elaboration were affected by

students contribution toward their post-secondary educational experience when controlling for academic success as measured by GPA. It was concluded that when controlling for GPA, both intrinsic goal orientation and elaboration are statistically significant.

Acknowledgments

This has been a voyage for which I owe acknowledgement and appreciation to many people. I would first like to thank my committee members: Dr. Jill Salisbury-Glennon, Dr. Margaret Ross, Dr. Paris Strom, and Dr. Maria Witte. Thank you for your support and guidance. I appreciate the patience and understanding that you have shown me, and hope that one day I may pass that support forward to my own graduate students.

During this journey, I have met many influential people who have supported me and helped shape my thought processes throughout the completion of my degree. To my peers: there are many ups and downs involved in the doctoral process. I could not have finished my coursework or dissertation without your strong shoulders to lean on. To my professors: thank you for believing in me and sharing your knowledge and experience.

I would also like to thank my family. Thank you for your support and continued understanding of why I have chosen to spend such an extended period of time in school. I am done. I promise. I would like to specifically thank my grandmother who has always brought me home to the people who love me. To my father: thank you for being my father. Last but not least, to my husband, Brian: thank you for always believing in me. There have been many times during this process that you could have discouraged me or asked me not to pursue this degree, but you have always been supportive. You believed in me when I did not believe in myself. I love you and owe you more than I can express. Thank You.

Table of Contents

List of Tables

CHAPTER I. INTRODUCTION

Counselors, teachers and parents consistently encourage teenagers to strive toward a college education. The college population is predicted to increase from 13 million to 21 million between 2003 and 2015 (Strom, 2004). In Alabama there are two primary public universities: Auburn University and the University of Alabama. Between 2000 and 2012, both schools have raised their tuition rates almost 200 percent. The University of Alabama's tuition went from $3,014 to $9,200. Auburn University raised its tuition from $3,154 to $9,446 (Bennett & Wilezol, 2013). There is concern that this increase in tuition is gradually beginning to price the middle class out of post-secondary education. Middle class families feel that college is a road to success and that 'blue collar' jobs are losing their prestige. Currently, 18 million students are pursuing two or four year degrees. Another 2.9 million students are attending graduate schools (Selingo, 2013). Each year these numbers are increasing. Student loan debt has increased forty-five percent since the early 1990s. The top ten percent of borrowers owe more than $54,000 (Selingo, 2013).

Some students are not the sole contributors to their post-secondary education. Many parents and other family members assume the burden of student post-secondary debt (Selingo, 2013). These staggering statistics raise significant questions such as: How does this lack of future responsibility affect students? Does it hinder their motivation or cognitive learning strategies?

The present study sought to investigate how personal contribution toward post-secondary education affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education at a large Southeastern University. The outcome sought to identify the effects of increased post-secondary expenses on the average student, as well as the effects of student financial contributions to their educational experience on their motivation, cognitive learning strategies, and metacognitive self-regulation.

There is abundant research into the increases in college tuition. However, there remains a paucity of research into the effects that the post-secondary educational experience – especially the financial experiences – has on student motivation, cognitive learning strategies, and metacognitive self-regulation.

Background

The rise in college attendance began with the creation of the GI Bill after World War II (Bennett & Wilezol, 2013). Per this Bill, WWII veterans were allowed to attend college for free after the war was over (Bennett & Wilezol, 2013; Stanley, 2003). Many veterans attended college using the funds from this program while some passed their tuition assistance on to their children. Also, with the end of WWII, there was an increase in childbirth dubbed the "Baby Boom." Since many parents had attended college, they wanted the same for their children. Those who did not attend school wanted their children to do so in order to keep up with the growing middle class. This led to an increase in university enrollment (Bennett & Wilezol, 2013).

Families of this time expected that their children would be able to maintain or surpass the level of success they had attained. This was the first time that the federal government started to supplement aid to colleges and universities. As more people attended college, more aid was

needed, and the federal government became an increasingly large contributor to universities (Bennett & Wilezol, 2013).

As time progressed, more students began to attend college. According to the College Board, in 2008 around half of all 18–21 year olds were enrolled in college (Digest of Educational Statistics, 2009). As more students began filling the seats of colleges and universities, tuition rates started rising inversely with the economic downturn. Tuition at Auburn University more than tripled over a twelve-year period from 2000 to 2012, ballooning from $3,154 to $9,446 (Bennett & Wilezol, 2013). The federal money influx slowed, necessitating the increase in tuition prices for colleges and universities.

Colleges and universities are gradually pricing out the middle class. Middle-class families believe that higher education is the way to a stable lifestyle, but with the rising cost of tuition they can no longer afford to send their children to college (Bennett & Wilezol, 2013). To offset the cost, many colleges offer students financial aid packages weighted heavily with student loans (Selingo, 2013). Many students do not understand the future complications and implications of large amounts of debt. They are enamored with the idea of attending college and often quickly accept financial aid packages that are laden with loans. These loans have the potential to ultimately make students easy prey for creditors. Also, colleges that help students get loans are not held accountable for making sure that they graduate. To make the investment worthwhile for taxpayers and students, students must graduate and work in a profession that will pay enough money for them to pay back loans.

Other students use parental aid to get through school. Parents of different income levels provide various levels of financial aid toward their children's education. They make difficult financial decisions to ensure that their children have the opportunity to attend college. Parents

who contribute significantly to the cost of their child's post-secondary education may create conditions that decrease a student's GPA but increases his/her graduation rate (Hamilton, 2013). The present study attempted to expand upon these ideas by looking at the effects of student financial contribution on student motivation, cognitive learning strategies, and metacognitive self-regulation, as these variables have been shown to be related to academic success because they lead to academic success (Hamilton, 2013).

Statement of the Problem

Post-secondary expenses are comprised of room and board, tuition and fees, books and supplies, personal expenses, and transportation. Tuition is the most costly of the five categories. Tuition is determined by the residency status of the student and is often classified as in-state or out-of-state tuition. The rationale for this difference is that students who live in-state contribute to state income tax through their parents. In-state tuition is determined two ways: 1) by a college board, and 2) by the state legislature (Fethke, 2006). Tuition is a major factor when students choose a college (Dotterweich & Baryla, 2005). Many studies focus on the rise of college tuition during the last decade in the United States.

Students mistakenly assume that because a university has high tuition, it offers quality education; therefore, students expect a higher salary at graduation (Dotterweich & Baryla, 2005). Many studies focus on student retention and graduation rates of colleges and universities, but these studies do not focus on the role that tuition plays in their graduates' academic successes.

In today's economy, more students are entering universities, so understanding tuition is important (Mullen, Goyette & Soares, 2003). As tuition rises, students incur more debt. Due to this debt, graduates and non-graduates have to delay major purchases (such as home ownership) because they are paying off student loans (Bennett & Wilezol, 2013). The federal government

subsidizes some loans for students. They offer a lower interest rate than un-subsidized loans, which are susceptible to market fluctuations (Stack & Vedvik, 2011).

The present study attempted to understand the effect of student financial contributions toward post-secondary educational experience on student motivation, cognitive learning strategies, and metacognitive self-regulation. It took into consideration that funding for students' post-secondary educational experience can come from many different outlets. Parents and family members contribute 30% of the average American student's post-secondary tuition and fees. Students contribute the remaining 70% through work, loans, and scholarships (IPSOS, 2013).

Purpose of the Study

The paucity of research in the field of student financial contribution affecting student motivation, cognitive learning strategies, and metacognitive self-regulation in post-secondary education is addressed by this study. To date, and to the best of the author's knowledge, no research has been done to study the effect of student financial contribution on students' motivation, cognitive learning strategies, and metacognitive self-regulation. Limited research has been conducted by Hamilton (2013) on the effects of parental aid on student GPA using a national data set, but the study did not address how parental aid affects student motivation and learning strategies. Zhang (2007) has conducted research on the effects of student debt on intrinsic and extrinsic motivation. This study elucidates the effects of student financial contribution toward student post-secondary experience on student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education at a large Southeastern University during the 2014 summer semester.

Further, it is hoped that this study may provide insight into how student financial contribution toward post-secondary experience affects students in the classroom. This research further seeks to provide insights into how these variables can help inform legal policy makers and universities about what can be done in the United States to ensure that post-secondary education stays affordable for the middle class and that the cost to students has the smallest affect on their academic success as possible.

Theoretical Framework

The Motivated Strategies for Learning Questionnaire (MSLQ) was designed using a social cognitive view of motivation (MSLQ; Pintrich, Smith, Garcia, & McKeanchie, 1991). It finds that students' motivation is linked to their ability to utilize cognitive and metacognitive self-regulation. By using these strategies, students learn to self-regulate their behavior to assist them in achieving a goal, as self-regulation results from the synergy of cognition and motivation (Pintrich, 1989). Students' self-efficacy influences the cognitive strategies that are employed and thus the students' belief about a task and academic success (Duncan & McKeanchie, 2005). This study utilizes the subscales of the MSLQ in an effort to investigate how student financial contribution toward post-secondary experiences affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students.

Research Questions

Using a quantitative approach, this study attempted to determine the impact of student financial contribution toward post-secondary experience and its effect on student motivation, cognitive learning strategies, and metacognitive self-regulation. A very limited amount of research has addressed the impact of student financial contribution toward their post-secondary experience and its effect on student motivation, cognitive learning strategies and metacognitive

self-regulation. This study attempted to replicate certain aspects of Hamilton's (2013) study and expand upon its basic tenets. Zhang (2007) found that student's intrinsic motivation is improved when they borrow money for post-secondary education. To date, and to the best of the author's knowledge, no researchers have looked at the impact of student financial contribution toward post-secondary experience and its affect on student motivation, cognitive learning strategies, and metacognitive self-regulation. The following research questions were explored.

1) Does student financial contribution toward post-secondary educational experience predict motivation among students who are enrolled in the College of Education?
    a) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education?
        i) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education when controlling for success in school?
    b) Does student financial contribution toward post-secondary educational experience predict extrinsic goal orientation among students who are enrolled in the College of Education?
    c) Does student financial contribution toward post-secondary educational experience predict task value among students who are enrolled in the College of Education?

2) Does student financial contribution toward post-secondary educational experience predict cognitive learning strategies among students who are enrolled in the College of Education?

   a) Does student financial contribution toward post-secondary educational experience predict rehearsal among students who are enrolled in the College of Education?

   b) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education?

      i) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education when controlling for success in school?

   c) Does student financial contribution toward post-secondary educational experience predict organization among students who are enrolled in the College of Education?

   d) Does student financial contribution toward post-secondary educational experience predict critical thinking among students who are enrolled in the College of Education?

3) Does student financial contribution toward post-secondary educational experience predict student metacognitive self-regulation among students who are enrolled in the College of Education?

Hypotheses

1) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and motivation among students who are enrolled in the College of Education.
    a) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and intrinsic goal orientation among students who are enrolled in the College of Education.
        i) There is no relationship between student financial contribution and intrinsic goal orientation when controlling for student academic success as measured by GPA.
    b) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and extrinsic goal orientation among students who are enrolled in the College of Education.
    c) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and task value among students who are enrolled in the College of Education.
2) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and cognitive learning strategies among students who are enrolled in the College of Education.
    a) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and rehearsal among students who are enrolled in the College of Education.

b) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and elaboration among students who are enrolled in the College of Education.

i) There is no relationship between student financial contribution and elaboration when controlling for student academic success as measured by GPA.

c) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and organization among students who are enrolled in the College of Education.

d) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and critical thinking among students who are enrolled in the College of Education.

3) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and student metacognitive self-regulation among students who are enrolled in the College of Education.

Nature of the Study

The study was a quantitative study that uses a survey methodology. In order to accurately engage students within the College of Education at a large Southeastern University, a survey was determined to be the best method in which to conduct this study. The survey was given to students to gather financial information and course load information. It also contained subsections from the Motivated Strategies of Learning Questionnaire (MSLQ). This allowed the researcher to understand the relationship between student financial contribution toward post-secondary experience and its effect on student motivation, cognitive learning strategies, and

metacognitive self-regulation. Students received the survey via e-mail through the Office of Institutional Research and Assessment. Students were sent a link to the survey on the Qualtrics webpage. A one-dollar donation was made to the St. Vincent De Paul Society for every student that participated in the survey.

After the quantitative data was collected it was analyzed using the Statistical Package for the Social Sciences 22.0 (SPSS). Multiple simple regressions were run to determine the relationship between student financial contribution and the following MSLQ subscales: intrinsic goal orientation, extrinsic goal orientation, task value, rehearsal, elaboration, organization, critical thinking, and metacognitive self-regulation. For those questions that reached statistical significance, hierarchical multiple regressions were run to control for academic success as measured by GPA.

Significance of the Study

As more students attend college, tuition rises due to lack of federal contribution or inflation. The United States is largely a service economy, and without attending school at a post-secondary level to learn a skill, many job opportunities will not be available to students. If colleges make tuition unaffordable for middle-class students, these students will be unable to gain the skills needed in the workforce, therefore widening gap between the rich and the poor.

Parents who want to help their children to reach the middle class contribute a large percentage to their schooling. However, other studies have shown that higher amounts of parental financial contribution causes lower student GPA (Hamilton, 2013). This study tried to replicate the basic tenets of Hamilton's (2013) study while expanding upon its basic ideas. It also attempted to outline the facets of student financial contribution toward post-secondary

experience and its effect on student motivation, cognitive learning strategies and metacognitive self-regulation.

Lawmakers constantly try to change the basic tenets of our social fabric. Research needs to be done to inform them on the ways that their policies are affecting middle-class college students.

Definition of Terms

Academic Success—In the represented study academic success is defined as a Grade Point Average (GPA) above a 3.0.

Adjusted Cohort—An adjusted cohort excludes individuals who transferred out, due to such factors as: death, disability, military service, or Foreign Service such as the Peace Corps (National Center for Educational Statistics, 2013).

Cognitive Engagement—The integration and utilization of students' motivations and strategies in the course of their learning (Richardson & Newby, 2010).

Critical Thinking—The ability of a student to apply previous knowledge to different situations to solve problems, reach decisions, or make critical evaluations with respect to standards of excellence (McKeachie, Pintrich, Lin, Smith & Sharma, 1990; Pintrich, Smith, Garcia, & McKeachie, 1991).

Elaboration—A learning strategy that an individual uses to paraphrase or summarize information to better help them learn material (Weinstein & Mayer, 1986).

Extrinsic Motivation—The completion of an activity by a learner because it will lead to a suitable outcome (Deci & Ryan, 2012).

Government Issue Bill (GI Bill)—A bill that allows veterans to attend college for free or makes them eligible for a subsidy after a period of service (Stanley, 2003).

Graduation Rate—Graduation rate is determined by the graduation of students within 150% of normal time or 6 years from when they started college, divided by the adjusted cohort (National Center for Educational Statistics, 2013).

Intrinsic Motivation—An individual's desire to complete a task out of interest (Wigfield, Cambria & Eccles, 2012; Deci & Ryan, 2012).

Middle Class—The National Census Bureau does not have a specific definition for middle class; however, they do define that the poverty line in the United States for a family of four is roughly $24,000 and that middle-class earning ends roughly at $250,000 (United States Census Bureau, 2013).

Motivation—The process through which goals are planned, organized, and implemented (Schunk & Usher, 2012).

Organization—The transferal process to move information from the short-term memory to the long-term memory (Akinson & Shiffrin, 1971).

Parental Aid—In this research study parental aid is defined as the amount parents contribute to student tuition and fees during post-secondary education (Hamilton, 2013).

Post-secondary Educational Expenses—Post-secondary educational expenses are comprised of room and board, tuition, fees, books, supplies, personal expenses, and transportation.

Rehearsal—"An overt or covert repetition of information," and "is employed in numerous situations" (Atkinson & Shiffrin, 1971).

Self-efficacy—The belief in one's ability to complete a task (Schunk and Usher, 2012).

Self-regulation—The process which human beings use to activate and sustain behaviors; they are systematic and attempt to achieve a goal (Schunk & Usher, 2012).

Social Mobility—The ability to change your economic position in society and move between the social strata of society.

Student Financial Contributions—Includes student loans, scholarships, personal savings, full and part-time summer employment and full and part-time school year employment.

Task Value—Students' perceived value of a task (Wigfield & Eccles, 1992)

Assumptions

1) Answers on the survey will be accurate and truthful.
2) All 564 students enrolled in the College of Education at a large Southeastern University during the 2014 summer semester had an equal chance of being chosen as participants.

Limitations

The study was limited because it focused only on undergraduates enrolled the College of Education in a research intensive, land grant university in the southeast. The sample for this study is a convenience sample. Participants were not randomly selected—they were chosen based on their agreement to participate in an online survey. Therefore, the sample will not reflect the general population. Edwards (1957) also proposes that students respond to surveys based on their need for social desirability. Social desirability is the need to receive approval and acceptance from peers. It also changes the way that individuals see themselves and therefore affects their answers on self-reporting instruments (Kovacic, Galic, & Jerneic, 2014). This poses many validity questions about self-report surveys. Winne and Perry (2000) found that when students are asked to self-report, they cannot be completely objective. Self-report leaves open the option for misinformation, even though it might not be intentional.

CHAPTER II. LITERATURE REVIEW

Tuition is a major factor that students consider when choosing a college or university. Tuition is defined as the amount that students pay in fees and credit hours for post-secondary schooling (Bennett & Wilezol, 2013). Parents and family members contribute 30% of the average American student's post-secondary tuition and fees. Students contribute the remaining 70% through work, loans, and scholarships (IPSOS, 2013). This is more than any other resource utilized for paying tuition and fees. Through this literature review, the researcher attempted to analyze the impact that student financial contribution has on student motivation, cognitive learning strategies, and metacognitive self-regulation amongst education majors.

History of Tuition in the United States

College tuition pricing has changed greatly in the United States following the 1950s, when the government started providing financial aid to broaden the accessibility of a college education to World War II Veterans. In 1910, the United States only had 2.8% of 18 to 24-year-olds in post-secondary education. By 1950, that number had increased to 15% (Mullin & Honeyman, 2008). With the rise in post-secondary attendance, new two-year colleges began to open their doors. This allowed universities to focus on more specialized areas including graduate schools (Mullin & Honeyman, 2008).

The National Defense Act of 1958 signaled the conclusion of the era of prosperity for government funding to universities. It introduced the use of student loans as an important funding tool for students. In the 1960s, the tuition gap between community colleges and universities began to widen. Once this shift took place, institutions began to differentiate their costs, leading to the current tuition system used by the majority of universities in the United

States (Mullin & Honeyman, 2008). Specifically, this led to increased tuition across many public and private universities.

Tuition

Tuition is the majority of the cost of students' post-secondary experience. Tuition, in most cases, is determined by two different arrangements. Either the state legislature establishes tuition rates, or an independent board determines the rate for individual institutions (Fethke, 2006). There is also much debate in the United States about resident and non-resident statuses at universities. One of the many pitfalls of non-resident tuition costs is that many public institutions will have lower percentages of out-of-state students within their population unless the university boasts a 'big-name' image (Dotterweich & Baryla, 2005). Fethke (2006) suggests that there are only three reasons why a university should increase tuition: 1) increase in the cost of education, 2) resident willingness to pay increases, and 3) decrease in the level of state revenue. He also suggests there be a fixed tuition payment with a tuition rebate.

The goal of universities is to set a non-resident tuition rate that reflects the priorities of the population they serve and to retain as many students as possible. Understanding the relationship between non-resident tuition and non-resident attendance is challenging. Dotterweich and Baryla (2005) found that it is difficult for public universities in the United States to retain non-resident students unless the school is viewed as prestigious or will lead to better pay after graduation. However, this is not the case for private universities because they offer a specific service and draw a specific type of student (Dotterweich & Baryla, 2005). Many schools that do not maintain a balance between tuition and notoriety end up failing financially. Dickinson College, a private post-secondary institution, failed in setting proper tuition rates and almost collapsed. Massa and Parker (2007) found that since the school did not keep a balance

between tuition, student aid, and retention, the school found itself in financial difficulty. Schools create financial aid packages for students which helps the school control the amount of aid that students receive from the university and the federal government.

According to the National Center for Educational Statistics (2010), 79% of all undergraduate students in 2008–2009 received financial aid. Keeping in mind these statistics were during a period of recession, it is a considerable percentage. Financial aid is defined as public assistance from the government. Undergraduates with family incomes that are below the poverty line in the United States receive this in the form of Pell Grants, which do not have to be repaid. Public assistance helps offset the cost of post-secondary schooling in the United States and helps improve student retention.

Massa and Parker (2007) recommend institutions setting tuition to cover overhead. When an institution raises tuition prices, three outcomes may occur: 1) high retention and high revenue increase, 2) moderate retention and moderate revenue increase, or 3) low retention and low revenue increase (Bryan & Whipple, 1995). Dickinson College relied heavily on financial aid and suffered from low retention and revenue. Student retention is an important factor that post-secondary schools must consider when setting tuition rates. However, the introduction of online courses also poses an even larger problem for traditional 'brick and mortar' universities.

According to the Auburn University website, students who are considered Alabama residents would pay an average of $28,098 per year to attend the university. The financial breakdown is as follows: tuition and fees – $9,852; room and board – $11,552; books and supplies – $1,200; transportation – $2,816; and personal – $2,678. Non-residents would pay $44,610. The financial breakdown is as follows: tuition and fees – $26,364; room and board –

$11,552; books and supplies – $1,200; transportation – $2,816; and personal $2,678 (Auburn University, 2014).

Financial Assistance and Paying for School

In the United States, it is increasingly common for parents to contribute to their children's post-secondary education. IPSOS publishes a report every few years that lists how average American students acquire the funds to pay for college. The most recent report was published in 2013 and found that parental aid in the form of parental borrowing, income, and savings makes up the majority of how American college students pay for post-secondary education. Family and friends make up another five percent of tuition contributions (IPSOS, 2013). Combined, these make up thirty-six percent of all contributions toward tuition and fees. The next highest category for paying tuition was grants and scholarships, which only constitutes 30% (IPSOS, 2013). Grants and scholarships can be from the federal or state government or private organizations. Some students also take out loans while in school. Student borrowing made up 18% of tuition contributions in 2013 (IPSOS, 2013).

Student debt increases can be attributed to the rise in the cost of tuition. Students who worry about debt have a higher likelihood of not completing their degree than do other students (Cook, Barkham, Audin, Bradley & Davy, 2004). Since parental and student financial contributions make up a large portion of student tuition and fees, researchers need to identify the effects of these contributions on post-secondary student motivation, cognitive learning strategies, and metacognitive self-regulation to help lighten the stress of the financial burden and promote graduation rates. Hamilton (2013) found that students with higher percentages of parental aid maintained a lower GPA but a higher graduation rate.

Steelman and Powell (1991) found that parental assistance is intergenerational. Parents who received parental financial help are more likely to provide assistance to their children for school. This poses a way to help continue status level and resource-dilution (Steelman & Powell, 1991). Swatz, Minzee, Uno, Mortimer, and O'Brien (2011) found that even though children who receive parental support tend to have higher rates of school enrollment, they experience more negative life events and employment problems. Borvarsson and Walker (2004) explain this phenomenon by stating "parental support undermines the incentive to excel" (p. 484). Thus parental contributions negatively affect a student's motivation. Receiving "free" money for college in the form of parental aid, grants, and/or scholarships is an external motivator. It allows students to spend time in college using money not earned to support themselves while maintaining a certain degree of freedom. This study attempted to look at the effects of student financial contribution toward tuition on student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education.

Theoretical Framework

The Motivated Strategies for Learning Questionnaire (MSLQ) was designed using a social cognitive view of motivation (MSLQ; Pintrich, Smith, Garcia, & McKeanchie, 1991). It finds that students' motivation is linked to their ability to utilize cognitive and metacognitive self-regulation. By using these strategies, students learn to self-regulate their behavior to assist them in achieving a goal, as self-regulation results from the synergy of cognition and motivation (Pintrich, 1989). Students' self-efficacy influences the cognitive strategies that are employed and thus the students' belief about a task and academic success (Duncan & McKeanchie, 2005). This study utilized subscales of the MSLQ in an effort to investigate how student financial

contribution toward post-secondary experiences affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students.

MSLQ

The MSLQ was initially created to measure college students' motivational orientation and their use of different cognitive learning strategies (Pintrich, Smith, Garcia, and McKeachie, 1991). Many researchers have used the instrument in their investigations, most have used the instruments initial participant group but others have adjusted the instrument for younger students. A few examples of these studies are discussed in this section.

In college students, higher levels of performance were correlated with intrinsic goal orientation, task value, and self-efficacy (Garcia & Pintrich, 2000). Previous uses of the MSLQ with College of Education undergraduate students have found that task value, control beliefs, perceived competence, test anxiety, rehearsal, critical thinking, time and study management, study environment and effort management account for a unique variance in predicating student course grades (McClendon, 2015). Lapan, Kardash, and Turner (2002), also used the MSLQ and have reported that self-regulated learners better monitor their own behavior throughout the completion of a goal. Moos (2009), found that undergraduate students who use self-regulated learning strategies are better equip to integrate information from various sources. Also, while completing tasks, students' learning correlates with their self-regulation, as determined by the MSLQ (Cheng & Chau, 2003).

Lynch (2010) distributed the MSLQ to undergraduate students and found correlations between course grade, self-efficacy, intrinsic and extrinsic motivation and task value in an physics course. Paulsen & Feldmans (2007), found that student with more sophisticated ideas about their self-efficacy are more likely to use cognitive learning strategies. They also found that

there is a positive relationship between students with a naïve beliefs about learning and lower order cognitive learning strategies and a negative relationship with higher-order cognitive strategies (Paulsen & Feldman, 2007). The MSLQ has also been translated into Turkish to measure the self-regulated learning abilities of pre-service science teachers. These studies have found that students in a non-traditional science education programs have higher self-regulation abilities than in traditional programs. (Yakar, Can, & Besler 2013).

Subsequent studies published by their creators have found that in younger students, self-efficacy and intrinsic value were positively related to cognitive engagement and performance (Pintrich, De Groot, & E.V., 1990). Younger students who score higher on the task value subsection of the MSLQ are more apt at integrating self-regulated learning strategies. Also, those same students who scored higher on the task value in mathematics are described as being more cognitively, metacognitively and motivationally competent compared to their peers (Metallidou & Vlachou, 2010). It has also been found with sixth grade students that higher preforming students tend to use self-regulated strategies more frequently than their underperforming peers (Ee, Moore, Atputhasamy, 2003).

Motivation

Motivation is the desire to complete a task (Webster, 2013). Motivation is critical to college and university student academic success (Anderson & Keith, 1997; Dweck & Master, 2009; Schunck & Zimmerman, 1994; Wentzel & Wigfield, 2009). Student motivation in post-secondary education is an important aspect because it dictates the desire of students to complete college. The cost-benefit of college is viewed positively when economic times allow for graduates to obtain jobs in their field. Motivation can be a somewhat ambiguous concept to measure, in part, because every student is motivated differently.

According to Moen and Doyle (1978), the most difficult task of this type of study is determining how much motivation students have and how students with high motivation and low motivation differ when answering certain types of questions. Intrinsic motivation is more desirable for students because it allows them to motivate themselves without external stimuli. Students must learn to self-regulate their behavior because external motivation eventually extinguishes (Mishel, Shoda, & Rodrigeuz, 1989). The ideal student would be internally motivated and therefore desire to continue learning simply for the knowledge to be gained.

Gredler (2009) suggests rewards should be limited because students will only respond while the rewards are present. Gredler (2009) found that after the initial interaction with the reward, two things begin to control the response of the subject: a) the behavior itself (speech), and b) the internal stimuli. The goal would be to limit the external factors that might hinder internal motivation.

Traditional younger college students, who are still adolescents, need a combination of situations to become academically successful and are more driven by external factors (Wolfgang & Dowling, 1981). Older learners in their 20s and 30s are still susceptible to an extrinsic motivator but are found to be more cognitively invested in what they are learning because they find more practical use for the information (Wolfgang & Dowling, 1981). It is possible that assessing intrinsic and extrinsic motivation could help to retain and identify students who are at-risk for dropping out. Intrinsically motivated students tend to perform better in school because they do not rely on the external factors of many adolescent learners (Wolfgang & Dowling, 1981).

There are many non-malleable environmental characteristics that affect student motivation in school such as the following: socioeconomic status, parental educational level,

race, and gender (Walker, Greene, & Mansell, 2006). Byrnes (2003) found that these non-malleable factors will not decrease the risk factors of students academically, and researchers should focus on malleable factors that can be changed; hence, student financial contribution toward tuition affects student motivation. Dillon and Greene (2003) also found focusing on research that cannot be controlled gives researchers little understanding of what students can change academically to become academically successful. Identification of students who are driven by external factors will allow for universities to help to promote intrinsic motivators for students to achieve a higher level of performance.

Achievement Goal Orientation Theories

Achievement goal orientation theories were developed from a cluster of theories by Nicholls (1989), Dweck (1986), Ames (1992), and Elliot (1999) and has evolved focusing on various fields (work, education, and sports). Achievement goal orientation theories focused mainly on the development of an individual's desire to accomplish specific goals. It finds that the desire to seem competent or to achieve some level of performance is the motivating force behind achievement related activities (Nicholls, 1989). There is also a second tier to understanding the theory that people need to consider. It includes the criteria used to judge if a standard is met and the necessity for students to understand each goal.

In a triarchic conception of achievement goal orientation, mastery, performance-approach, and performance-avoidance are three main types of achievement goals (Middleton & Midgley, 1997). Mastery goals represent an individual's concern with developing a specific task. Performance goals are based on an individual's concern with appearing capable—not about developing a skill. Performance-avoidance is an individual trying to avoid appearing incapable (Urdan & Turner, 2005).

The overarching objective of the achievement goal theory is to define the driving factors in an individual's motivation. Performance level is important because it reveals valuable information about students' potential to adapt to new achievement conditions (Elliot, Cury, Fryer, & Huguet, 2006). Goal orientation is important for student academic success because the environment of the classroom can determine the type of goal orientation students will adopt (Maehr & Anderman, 1993). Pintrich (2000) posited a model of achievement goal orientation espousing four achievement goal orientations: mastery approach, mastery avoidance, performance approach, performance avoidance.

Social Cognitive Motivation

The social learning theory was developed by Miller and Dollard (1941) and began as an interweaving of the behavioral and cognitive theories of learning. Later Bandura (1977) elaborated upon these ideas and began his own research based on the idea that the first facets of learning occur through observation and imitation, and then, through the consequences of their actions, people modify their behavior to achieve the desired outcomes (Bandura, 1963). This later became known as the social cognitive theory (SCT).

SCT is based on the following actions: attention, retention, reproduction, and motivation. An individual's attention determines the action they observe. Retention occurs through the attention of an action that was observed. Reproduction of the activity occurs as the individual attempts to manipulate their environment. Finally, the motivation to reproduce the activity again is based on the reaction of the environment to the individual's original stimuli (Bandura, 1977).

Pintrich and de Groot (1990) found that the use of cognitive learning strategies help students regulate, monitor, and motivate their behavior are the most conducive to academic success. Also, both cognitive learning strategies and metacognitive self-regulation are needed

for students to learn to adjust their behavior to achieve learning goals. Pintrich and Schunk (2002) conclude that motivation and cognitive learning strategies are both necessary for students to be academically successful. This integration of both cognitive strategies and motivational theories created the social cognitive models of motivation. This theory stresses that motivation is on a spectrum and is contextual. The final assumption of the social cognitive theory of motivation is that cognition is central to the individual's active regulation of their behavior, thinking, and motivation that mediates their ability to be academically successful (Pintrich & Schunk, 2002).

Schunk and Zimmerman (1997) created the social cognitive model of self-regulation which includes four phases: observational, emulative, self-controlled, and self-regulated. The observational and emulative stages rely on external stimuli. The learner observes then replicates the style of the actions observed. The learner does not replicate the action identically but rather only copies the style of the action. The latter two stages require independent action of the observed action. Self-control is the utilization of the skill independently in an alternative setting. Self-regulation is the learner's alteration of the action to achieve a desired outcome of a task after it has been internalized.

Self-Determination Theory

Self-determination theory (SDT) of motivation was first founded by Deci (1971). It finds that people are motivated by three factors: autonomy, competence, and relatedness (Ryan, 1982). Autonomy is defined as psychological freedom. Competence is the desire to be seen as capable by others. Relatedness is that ability of the student to find meaning in the subject matter (Deci, 1971). If any of these three psychological needs are not met then there is a detrimental effect on the wellness of the student's learning situation (Ryan, 1982).

Intrinsic Goal Orientation

Intrinsic motivation was first identified by White (1959) while studying organisms. He realized that many animals engage in behaviors for enjoyments, even if the activity lacks reward or reinforcement. Intrinsic motivation refers to doing something because it creates joy or is interesting (Deci & Ryan, 1985).

Intrinsic motivation sub-theory of the Self-Determination Theory (SDT) has been traditionally measured in two ways: self-report of the individual and through experimental methods. Self-report participants are asked to identify their level of enjoyment of an activity (Ryan, 1982). In a study conducted by Deci (1971), the researcher measured intrinsic motivation based on "free choice." Participants were exposed to a task then instructed that they no longer needed to complete the task. If the participants chose to complete the task, it was defined as "free choice." Then, Deci (1971) measured the level of intrinsic motivation based on the amount of time the participant spent on the task without reward. In the classroom, intrinsic motivation is important because it is the vehicle for students learning. "Intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that engenders versus undermines it" (Ryan & Deci, 2000).

Extrinsic Goal Orientation

Extrinsic motivation is the desire to complete an activity based on an external stimuli. According to Deci and Ryan (1985), organismic integration theory is broken down into four categories: externally regulated behavior, introjected regulation of behavior, regulation through identification, and integrated regulation. Externally regulated behavior is based on the promise of a reward. The acceptance of a behavior as a way to regulate one's personality is introjected regulation of behavior. Regulation through identification is an action that is personally

important. Integrated regulation is the full assimilation of a belief by an individual (Deci & Ryan, 1985). Throughout an individual's life span, he/she can internalize different aspects of social values and regulations based on his/her specific desires and situations (Ryan & Deci, 2000).

Task Value

Based on Wigfield and Eccles (1992) expectancy value theory, the term "task value" refers to the students' perceived value of a task. They also found students are more likely to perform a task if they perceive that the task has value. Bandura's (1993) social cognitive theory indicates that if students find value in a task, they are more likely to develop stronger self-efficacy. Self-efficacy is the belief in one's ability to complete a task (Bandura, 1993). Task-value is important in determining an individual's performance in the classroom because it determines the meaningfulness of a task for an individual (Wigfield & Eccles, 2000).

Cognitive Engagement

Walker, Greene, and Mansell (2006) found that intrinsic and extrinsic motivations are predictors of student cognitive engagement. Dweck and Elliot (1983) suggest that cognitive engagement is also a predictor of motivation. The cyclical relationship between the two dictates that both are needed for student success. Cognitive engagement is also a predictor of academic success (Pintrich & Schrauben, 1992). Cognitive engagement is strategies that students utilize to complete a task (Richardson & Newby, 2010). For this study, we focused on the use of cognitive learning strategies: rehearsal, elaboration, organization, and critical thinking. Thus, active cognitive participation in post-secondary education depends on student motivation and the cognitive learning strategies used by students.

Information Processing

In 1890, William James was the first to describe Information Processing and found that there were two types of memory: primary and secondary. Primary memory consists of working memory, and secondary memory is unconscious/long-term memory (James, 1890). Expanding upon this idea, Atkinson and Shiffrin (1968) proposed their own ideas that included sensory memory, short-term memory, and long-term memory (Atkinson & Shiffrin, 1968). The Atkinson and Shiffrin multi-store model involves sensory stimuli that are moved to short-term memory storage through attention. It is either moved to long-term memory through transfer or kept in short-term memory through rehearsal. Control processes govern the flow of information into the long-term memory. The uses of control processes are done at the preference of the individual (Atkinson & Shiffrin, 1971).

Rehearsal

"Rehearsal, an overt or covert repetition of information, is employed in numerous situations" (Atkinson & Shiffrin, 1971). After the information is in long-term memory, it can be pulled into the short-term memory store through retrieval (Atkinson & Shiffrin, 1968). The Atkinson and Shiffrin multi-store model of rehearsal is important because it is the primary means of moving data from the short-term memory store to the long-term memory store (Atkinson & Shiffrin, 1968).

Organization

Coding refers to the class of control processes that can improve memory retrieval (Akinson & Shiffrin, 1971). Organization is a transferal process to move information from the short-term memory to the long-term memory. Organization of information in short-term

memory prior to its movement to long-term memory allows for longer retention of the information (Akinson & Shiffrin, 1971).

Elaboration

A theory of information processing is the levels-of-processing theory founded by Craik and Lockhart (1972). This model indicates that through attention and labeling, people utilize different levels of elaboration to find meaning in the information they process. In addition, all information processed can be retrieved, which contributes to an individual's ability to recall information that has been stored (Craik & Lockhart, 1972). Elaboration is a learning strategy that an individual uses to paraphrase or summarize information to better help them learn material. It is considered to be a higher-order learning strategy because it moves information into the long-term memory (Weinstein & Mayer, 1986).

Critical Thinking

Critical thinking is defined as the ability of a student to apply previous knowledge to different situations to solve problems, reach decisions, or make critical evaluations with respect to standards of excellence (McKeachie, Pintrich, Lin, Smith & Sharma, 1990; Pintrich, Smith, Garcia, & McKeachie, 1991). Critical thinking is important to the application and transfer of knowledge for problem solving and application in new situations (Nickerson, Perkins & Smith, 1985).

Metacognitive Self-regulation

Further, students need to learn to self-regulate their learning so that they can become more academically successful (Zimmerman, 2001). Self-regulated learning is defined as thoughts, actions, and feelings that are adapted to attain a goal (Schunk & Zimmerman, 1994). The teacher's main goal should be to help students learn to self-regulate so that they can

motivate themselves to be successful (Zimmerman, 2001). Once students learn to self-regulate, they can become life-long learners who motivate themselves despite the negative non-malleable factors from birth or upbringing. These factors include poverty, parents' level of education, living situation, and any other variable that is out of students' control. Motivation is directly linked to students' ability to self-regulate and participate in their own learning (Duncan & McKeachie, 2005). Thus, depending on the specific task that is to be completed, motivation can vary. Using this ideology, motivation, cognitive learning strategies, and metacognitive self-regulation are needed to help students become academically successful in post-secondary education.

Many studies have been done to test the practical application of the aforementioned the theories. A few examples are discussed below: After giving a survey to 152 undergraduate students enrolled in an Educational Technology course, Fishman (2014) found that student self-regulation plays a role in the relationship between desired academic outcomes and their perceptions of control of the academic outcome. Therefore, if students believe that they can affect the course grade, they are more likely to make the desired grade a reality.

Heikkila & Lonka (2006), Using 250 participants who attended a course on 'Thinking fearlessly,' answered a questionnaire, and returned the final course essay found that college students self-regulation is linked to their academic success, cognitive strategies, and learning (Heikkila & Lonka, 2006). Senecal, Koestner, and Vallerand (1995), found that self-regulation accounted for 25% of the variance in academic procrastination in undergraduates. Therefore, finding that academic procrastination is a motivational problem amongst students and can be addressed through intervention.

VanderStoep, Pintrich, & Fagerlin (1996), used 380 college students enrolled in humanities, social sciences, and natural science college courses from three different institutions to test their motivation, self-regulation, and knowledge. It was found that knowledge, motivation, and self-regulation distinguish high achievers from low achieves in social and natural sciences but not in humanities courses (VanderStoep, Pintrich, & Fagerlin, 1996). Using 152 undergraduate students at a Midwestern university, researchers was found there is a correlation between students' motivation, academic achievement, and self-regulation depending on their ethnicity and gender (Bembenutty, 2007).

Using developmental and regular admission students from different universities, Ley and Young (1998) found that self-regulation differs significantly between underprepared college students, those that need to take developmental courses, and regular admission college students. Regular admission students were found to have higher self-regulatory abilities (Ley & Young, 1998). Wolters (1998), found that students use cognitive, volitional, and motivational strategies to regulate their level of effort in an academic setting and that their motivational regulation is positively correlated with their goal orientation, use of cognitive learning strategies, and course grade. Thus, student self-regulation does affect course grade (Wolters, 1998).

Using 142 students enrolled in 10 different sections of a two-year college chemistry course, Miller (2014), found that self-regulation positively correlates with students' performance, thus proving previous theories correct (Miller, 2015). These studies show that student self-regulation does play an important role in student's academic success and is a vital asset to their education.

Statement of the Problem

Tuition is the largest expense of the post-secondary experience. Tuition cost is determined by establishing one of two rates: in-state or out-of-state. The rationale for this difference is that in-state students contribute state income tax through their parents. In-state tuition is determined two ways: 1) by a college board, and 2) by state legislature (Fethke, 2006). Tuition is a major factor when students choose a college (Dotterweich & Baryla, 2005).

Students find many different ways to pay for school. They might use loans, family income and savings, scholarships, savings, and part-time or full-time employment (IPSOS, 2013). Students have to determine how to pay for school before they attend college. With the rise in tuition, it has become a trend for parents to take on a larger portion of the debt for students (Hamilton, 2013). As tuition continues to rise, there is an increasing need for research into the effects of different means of paying for college on students' academic learning, motivation, and academic achievement.

In today's economy, more students are entering universities, which is why understanding the impact of tuition is important (Mullen, Goyette & Soares, 2003). As tuition rises, students incur more debt. Students who attend college have to delay major purchases (such as home ownership) because they are paying off student loans for longer periods of time (Bennett & Wilezol, 2013). The federal government subsidizes some loans for students. They offer a lower interest rate than un-subsidized loans, which are susceptible to market fluctuations (Stack & Vedvik, 2011). Both of these factors affect the current market.

To circumnavigate the issues with student loans and other forms of aid many parents are paying for their children's post-secondary education themselves. Limited research has been done on the effects of student financial contribution on student motivation, cognitive learning

strategies and metacognitive self-regulation. If higher parental aid leads to lower GPAs, as Hamilton (2013) suggests, what implications can be anticipated by the use of student financial contribution toward post-secondary funding? If researchers can identify a connection between student financial contribution for post-secondary educational experiences and student motivation, cognitive learning strategies, and metacognitive self-regulation, they can encourage strategies to help students to graduate from college and become academically successful.

Research Questions

1) Does student financial contribution toward post-secondary educational experience predict motivation among students who are enrolled in the College of Education?
    a) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education?
        i) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education when controlling for success in school?
    b) Does student financial contribution toward post-secondary educational experience predict extrinsic goal orientation among students who are enrolled in the College of Education?
    c) Does student financial contribution toward post-secondary educational experience predict task value among students who are enrolled in the College of Education?

2) Does student financial contribution toward post-secondary educational experience predict cognitive learning strategies among students who are enrolled in the College of Education?

   a) Does student financial contribution toward post-secondary educational experience predict rehearsal among students who are enrolled in the College of Education?

   b) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education?

      i) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education when controlling for success in school?

   c) Does student financial contribution toward post-secondary educational experience predict organization among students who are enrolled in the College of Education?

   d) Does student financial contribution toward post-secondary educational experience predict critical thinking among students who are enrolled in the College of Education?

3) Does student financial contribution toward post-secondary educational experience predict student metacognitive self-regulation among students who are enrolled in the College of Education?

Hypotheses

1) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and motivation among students who are enrolled in the College of Education.
    a) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and intrinsic goal orientation among students who are enrolled in the College of Education.
        i) There is no relationship between student financial contribution and intrinsic goal orientation when controlling for student academic success as measured by GPA.
    b) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and extrinsic goal orientation among students who are enrolled in the College of Education.
    c) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and task value among students who are enrolled in the College of Education.
2) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and cognitive learning strategies among students who are enrolled in the College of Education.
    a) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and rehearsal among students who are enrolled in the College of Education.

b) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and elaboration among students who are enrolled in the College of Education.

i) There is no relationship between student financial contribution and elaboration when controlling for student academic success as measured by GPA.

c) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and organization among students who are enrolled in the College of Education.

d) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and critical thinking among students who are enrolled in the College of Education.

3) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and student metacognitive self-regulation among students who are enrolled in the College of Education.

Conclusion

By understanding the obstacles that many college students face when paying tuition and the impact of those obstacles, legislative and university policy makers and parents can make plans that induce the best outcomes for students. Motivation, cognitive learning strategies, and metacognitive self-regulation have a dynamic interaction with student academic success.

In conclusion, this study attempted to look at the relationship between student financial contribution toward their post-secondary experience and student motivation, cognitive learning strategies, and metacognitive self-regulation. Once these potential relationships can be

identified, universities can use the information to help produce students who are more cognitively engaged and more academically successful, and, therefore, more likely to graduate.

CHAPTER III. METHODS

The researcher attempted to examine the effects of financial contributions toward the post-secondary experience and its effect on student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education at a large Southeastern University. A survey methodological approach was used to gather data because it allowed for generalization of the results and rapid turnaround; it was also economical (Babbie, 1990). A survey was also used because is was a sound method of collecting data to answer the researcher's questions. The instrument collected information about course load, financial information, and subsections of the Motivated Strategies of Learning Questionnaire (MSLQ). The study investigated the effects of student financial contribution toward post-secondary educational experiences and student motivation, cognitive learning strategies, and metacognitive self-regulation.

Purpose of the Study

More research is needed to determine the effects of student personal financial contribution toward post-secondary experience on student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education at a large Southeastern University. There remains a paucity of research into the effects of student financial contribution on student motivational goal orientation. Some studies have looked into the effect that parental income and aid have on Grade Point Average (GPA) and graduation rates, but none have specifically looked at all the variables that are present in this

study. One such study conducted by Hamilton (2013) found that students with higher percentages of parental aid maintained a lower GPA but a higher graduation rate.

Zhang (2007) also finds that there is a high correlation between student borrowing for school and intrinsic motivation. Therefore, this study expands upon the findings of Hamilton's (2013) study. It broadens the current research in the field by looking at the larger affects of student financial contribution toward their post-secondary experience.

The present study specifically tried to identify the relationship between student financial contribution and cognitive learning strategies. Cognitive engagement is comprised of strategies that students utilize to complete a task (Richardson & Newby, 2010). Therefore, cognitive learning strategies are a result of cognitive engagement. The present study specifically focused on the following cognitive learning strategies: rehearsal, elaboration, organization, and critical thinking.

The correlation between students' contribution to their post-secondary experience and their ability to self-regulate their behavior was also addressed. To the best of the author's knowledge and to date, minimal research has been conducted into the effects of student financial contribution toward post-secondary experience on student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education.

Method

The present study is a quantitative study that utilized an online survey method. A survey was used to collect parental financial information, course load information, and students' means for paying for their post-secondary experience. The survey was also comprised of various subsections of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith,

Garcia, & McKeachie, 1991). All students nineteen and older enrolled in the College of Education during the 2014 summer semester had a chance to participate in the survey via a College of Education listserv.

Theoretical Framework

The Motivated Strategies for Learning Questionnaire (MSLQ) was designed using a social cognitive view of motivation (MSLQ; Pintrich, Smith, Garcia, & McKeanchie, 1991). It indicates that students' motivation is linked to their ability to utilize cognitive and metacognitive self-regulation. By using these strategies, students learn to self-regulate their behavior to assist them in achieving a goal, as self-regulation results from the synergy of cognition and motivation (Pintrich, 1989). Students' self-efficacy influences the cognitive learning strategies that are employed and thus the students' belief about a task and academic success (Duncan & McKeanchie, 2005). This study utilized subscales of the MSLQ in an effort to investigate how student financial contribution toward post-secondary experiences affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students.

Motivated Strategies of Learning Questionnaire (MSLQ)

The MSLQ is an eighty-one item self-report measure that gauges a person's motivation and self-regulated learning. It was created from a 1982 through 1986 National Center for Research to Improve Post-Secondary Teaching and Learning Grant (Pintrich & Garcia, 1991). Using 1,000 University of Michigan students, McKeachie and Pintrich fine-tuned the MSLQ. The revisions to the MSLQ took place in three waves during 1986, 1987, and 1988 (Duncan & McKeachie, 2005). The instrument was created to collect data from college students about their motivational orientation and learning strategies. Duncan and McKeachie (2005) found that, "the MSLQ was developed using a social-cognitive view of motivation and learning strategies, with

the student represented as an active processor of information whose beliefs and cognitions mediated important instructional input and task characteristics" (Duncan & McKeachie, 2005, p.117). Thus, student motivation depends on the specific task in which students are participating and the students' self-efficacy and interest.

Instrument Validation

The MSLQ has six motivation subscales and nine learning strategies subscales (Pintrich, Smith, Garcia & McKeachie, 1991). The authors also conducted a confirmatory factor analysis. It indicted that the MSLQ shows sound structure, and it is reasonable to claim factor validity from the confirmatory factor analysis findings (Pintrich, Smith, Garcia & McKeachie, 1991). The internal consistency of the MSLQ is estimated as ranging from 0.52 to 0.93 (Pintrich, Smith, Garcia & McKeachie, 1991). According to Benson (1998), the task value scale has an internal reliability of 0.90. The subscale correlations range from 0.00 to 0.70. Most are between 0.00 and 0.30, which indicates a weak relationship (Benson, 1998). The three value components that the researcher utilizes in this study have Cronbach alphas that are as follows: intrinsic goal orientation = .74, extrinsic goal orientation = .62, task value = .90, rehearsal = .69, elaboration = .76, organization = .64, critical thinking = .80, and self-regulation = .79. Overall the six sub categories in the MSLQ have Cronbach's alphas that range from .52 to .93. (Pintrich, Smith, Garcia & McKeachie, 1991).

Intrinsic Goal Orientation

Individuals who are intrinsically motivated have a desire to learn or master a skill. These questions try to assess the reasoning behind an individual's desire to pursue a task (Pintrich, Smith, Garcia, & McKeachie, 1991).

Extrinsic Goal Orientation

Students who are extrinsically motivated tend to try and find outside sources of approval such as rewards, compliments, and grades. These external variables serve as the primary motivator. The questions attempt to assess the individual's desire to purse a task (Rotgans & Schmidt, 2010). When students have high extrinsic goal orientation engage in a task for the sole purpose of the extrinsic motivator (Pintrich & Garcia, 1991).

Task Value

Task value is the student's estimation of how important, interesting, and useful a task is (Pintrich, Smith, Garcia, & McKeachie, 1991).

Rehearsal

"Rehearsal, an overt or covert repetition of information, is employed in numerous situations" (Atkinson & Shiffrin, 1971).

Elaboration

Elaboration is a learning strategy that an individual uses to paraphrase or summarize information to better help them learn material. It is considered to be a higher-order learning strategy because it moves information into the long-term memory (Weinstein & Mayer, 1986; Pintrich & Garcia, 1991).

Organization

Organization is a transferal process to move information from the short-term memory to the long-term memory (Atkinson & Shiffrin, 1971). It is also an active strategy that helps the learner become closely involved in a task, which should result in an increased academic performance (Pintrich & Garcia, 1991).

Critical Thinking

Critical thinking is the ability of a student to apply previous knowledge to different situations to solve problems, reach decisions, or make critical evaluations with respect to standards of excellence (McKeachie, Pintrich, Lin, Smith & Sharma, 1990; Pintrich, Smith, Garcia, & McKeachie, 1991).

Metacognitive Self-regulation

Self-regulated learning is defined as thoughts, actions, and feelings that are adapted to attain a goal (Schunk & Zimmerman, 1994). Pintrich and Garcia (1991) define metacognitive self-regulation as the awareness, knowledge, and control of cognition, which includes three regulatory activities: planning, monitoring, regulating. Planning is the creating of goals utilizing prior knowledge. Monitoring is the tracking and self-questioning of materials. Regulation is the adjustments of cognitive activities to reach the goal.

Cognitive learning strategies and metacognitive self-regulation are predictors of student cognitive engagement (Walker, Greene, & Mansell, 2006). Therefore, students are more likely to learn and become academically successful (Pintrich & Schauben, 1992).

Research Questions

1) Does student financial contribution toward post-secondary educational experience predict motivation among students who are enrolled in the College of Education?
    a) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education?

i) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education when controlling for success in school?

b) Does student financial contribution toward post-secondary educational experience predict extrinsic goal orientation among students who are enrolled in the College of Education?

c) Does student financial contribution toward post-secondary educational experience predict task value among students who are enrolled in the College of Education?

2) Does student financial contribution toward post-secondary educational experience predict cognitive learning strategies among students who are enrolled in the College of Education?

a) Does student financial contribution toward post-secondary educational experience predict rehearsal among students who are enrolled in the College of Education?

b) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education?

i) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education when controlling for success in school?

c) Does student financial contribution toward post-secondary educational experience predict organization among students who are enrolled in the College of Education?

d) Does student financial contribution toward post-secondary educational experience predict critical thinking among students who are enrolled in the College of Education?

3) Does student financial contribution toward post-secondary educational experience predict student metacognitive self-regulation among students who are enrolled in the College of Education?

Hypotheses

1) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and motivation among students who are enrolled in the College of Education.
    a) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and intrinsic goal orientation among students who are enrolled in the College of Education.
        i) There is no relationship between student financial contribution and intrinsic goal orientation when controlling for student academic success as measured by GPA.
    b) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and extrinsic goal orientation among students who are enrolled in the College of Education.
    c) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and task value among students who are enrolled in the College of Education.

2) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and cognitive learning strategies among students who are enrolled in the College of Education.
    a) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and rehearsal among students who are enrolled in the College of Education.
    b) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and elaboration among students who are enrolled in the College of Education.
        i) There is no relationship between student financial contribution and elaboration when controlling for student academic success as measured by GPA.
    c) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and organization among students who are enrolled in the College of Education.
    d) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and critical thinking among students who are enrolled in the College of Education.
3) There is a positive statistical relationship between student financial contribution toward their post-secondary educational experience and student metacognitive self-regulation among students who are enrolled in the College of Education.

Participants

The participants were students enrolled in the College of Education at a large Southeastern University and were over the age of nineteen during the time of the survey. An age requirement was established because in the state that the study was conducted individuals are not considered adults until the age of nineteen. Students over the age of nineteen were also used because they provide more insight into the affects of their contribution toward tuition. College freshman do not have a firm grasp on their financial situation (Simpson, Smith, Taylor, & Chadd, 2012). Also, according to the U.S. News & World Report (2009), the large Southeastern University used in the present study has a 63% freshman retention rate. The low retention rate and lack of financial investment lead the researcher to exempt those students nineteen and under from the survey. The study uses a single stage sampling procedure through the e-mail system via The Office of Institutional Research and Assessment which provided students with a link to a Qualtrics survey. The participants received an initial e-mail with two reminder e-mails. Following the final reminder, professors in the College of Education teaching summer courses with undergraduates were contacted via e-mail to ask if they would allow the researcher to visit their classes to encourage participation. The classes were visited, and students were encouraged via a verbal reminder by the researcher to complete the survey. All student contact was IRB approved. Self-selection took place because every individual nineteen years of age or older enrolled in the College of Education had an opportunity to participate in the study. All individuals were assigned a random number that helped keep their identities anonymous.

Instrumentation

The instrument was comprised of a survey obtaining financial information and the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeanchie, 1991). The researcher attempted to find a relationship between student financial contribution and intrinsic and extrinsic goal orientations, task value, rehearsal, elaboration, organization, critical thinking, and metacognitive self-regulation. Student post-secondary experiences are comprised of room and board, tuition and fees, books and supplies, personal expenses, and transportation. Multiple simple regressions were run to determine the relationship between student financial contribution and intrinsic goal orientation, student financial contribution and extrinsic goal orientation, student financial contribution and task value, student financial contribution and rehearsal, student financial contribution and elaboration, student financial contribution and organization, student financial contribution and critical thinking, and student financial contribution and metacognitive self-regulation. Hierarchical multiple regressions to control for academic success as determined by GPA were run on the simple regressions that reached statistical significance.

A survey methodological approach was chosen for this study to allow for the maximum number of participants and to develop a generalized understanding of the effects of student financial contribution on student motivation, cognitive learning strategies, and metacognitive self-regulation upon a large population.

Limitations

The study was limited because it only focused on students over the age of nineteen in the College of Education. The survey was also distributed during the summer semester 2014. The sample for this study was a convenience sample. Participants were not randomly selected; they

were self-selected as participants through the online survey. Therefore, these participants may not reflect the general population. Edwards (1957) also proposes that students respond to surveys based on their need for social desirability. Social desirability is the need to receive approval and acceptance from peers. This causes many concerns regarding the validity of self-report surveys. Winne and Perry (2000) found that when students are asked to self-report, they cannot be completely objective. Self-report leaves open the option for misinformation, even though it might not be intentional.

Summary

The present study used a quantitative survey methodological approach that attempted to identify the effects of student financial contribution on student motivation, cognitive learning strategies, and metacognitive self-regulation. Students enrolled in the College of Education were asked to participate in an online survey. The survey collected information about student course load, financial information, as well as included subsections from the MSLQ. After the participants completed the survey, the data was analyzed using simple regressions on SPSS 22.0. The simple regressions that reached statistical significance were analyzed using multiple hierarchical regressions controlling for academic success as measured by GPA. Finally, one goal of this research study was to provide insight into the way that student financial contribution affects students in college and to offer suggestions to parents and students trying to find various means to pay for their post-secondary experience.

CHAPTER IV. RESULTS

Introduction

Tuition in post-secondary institutions has increased by 200% in the last decade (Bennett & Wilezol, 2013). In the state where the study was conducted, the increase has begun pricing out the lower middle class, which makes up the majority of the state's population (United States Census Bureau, 2013). Students who do not have the option of parental financial support have several different options for financing their higher education. One such option is student loans. Students see college debt as an investment in their future, and in the last few decades, there have been significant increases in the amount of student debt they are incurring. This, however, has also led to the increase in student loan delinquencies (Bennett & Wilezol, 2013). Currently, 18 million students are pursuing two or four year degrees. Another 2.9 million are attending graduate schools (Selingo, 2013). Some of these students are provided parental financial support but many others rely on personal financial contributions.

Scholarships, full and part-time jobs, savings, and subsidized and unsubsidized loans are some of the means that students use to contribute to their post-secondary education. This study attempted to understand how student financial contribution towards post-secondary experience affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students enrolled in the College of Education.

Theoretical Framework

The Motivated Strategies for Learning Questionnaire (MSLQ) was designed using a social cognitive view of motivation (MSLQ; Pintrich, Smith, Garcia, & McKeanchie, 1991). It allows that students' motivation is linked to their ability to utilize cognitive and metacognitive self-regulation. By using these strategies, students learn to self-regulate their behavior to assist them in achieving a goal, as self-regulation results from the synergy of cognition and motivation (Pintrich, 1989). Students' self-efficacy influences the cognitive learning strategies that are employed and thus the students' belief about a task and academic success (Duncan & McKeanchie, 2005). This study utilized the subscales of the MSLQ in an effort to investigate how student financial contribution toward post-secondary experiences affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students.

Research Questions

1) Does student financial contribution toward post-secondary educational experience predict motivation among students who are enrolled in the College of Education?
    a) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education?
        i) Does student financial contribution toward post-secondary educational experience predict intrinsic goal orientation among students who are enrolled in the College of Education when controlling for success in school?
    b) Does student financial contribution toward post-secondary educational experience predict extrinsic goal orientation among students who are enrolled in the College of Education?

c) Does student financial contribution toward post-secondary educational experience predict task value among students who are enrolled in the College of Education?

2) Does student financial contribution toward post-secondary educational experience predict cognitive learning strategies among students who are enrolled in the College of Education?
    a) Does student financial contribution toward post-secondary educational experience predict rehearsal among students who are enrolled in the College of Education?
    b) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education?
        i) Does student financial contribution toward post-secondary educational experience predict elaboration among students who are enrolled in the College of Education when controlling for success in school?
    c) Does student financial contribution toward post-secondary educational experience predict organization among students who are enrolled in the College of Education?
    d) Does student financial contribution toward post-secondary educational experience predict critical thinking among students who are enrolled in the College of Education?
3) Does student financial contribution toward post-secondary educational experience predict student metacognitive self-regulation among students who are enrolled in the College of Education?

Hypotheses

1) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and motivation among students who are enrolled in the College of Education.
    a) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and intrinsic goal orientation among students who are enrolled in the College of Education.
        i) There is no relationship between student financial contribution and intrinsic goal orientation when controlling for student academic success as measured by GPA.
    b) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and extrinsic goal orientation among students who are enrolled in the College of Education.
    c) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and task value among students who are enrolled in the College of Education.
2) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and cognitive learning strategies among students who are enrolled in the College of Education.
    a) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and rehearsal among students who are enrolled in the College of Education.

b) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and elaboration among students who are enrolled in the College of Education.

i) There is no relationship between student financial contribution and elaboration when controlling for student academic success as measured by GPA.

c) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and organization among students who are enrolled in the College of Education.

d) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and critical thinking among students who are enrolled in the College of Education.

3) There is a positive statistical correlation between student financial contribution toward their post-secondary educational experience and student metacognitive self-regulation among students who are enrolled in the College of Education.

Study Design

The study used a quantitative design that utilized a survey and asked students over the age of nineteen who were enrolled in the College of Education to participate. In the state that the study was conducted, students under the age of nineteen may not participate in research studies without parental consent. They were also chosen because college freshman do not have a firm grasp on their financial situation (Simpson, Smith, Taylor, & Chadd, 2012). In order to accurately engage students enrolled in the College of Education about motivation, cognitive learning strategies, and metacognitive self-regulation, a survey was determined to be the best

method in which to conduct this study. Students from the College of Education were chosen as participants because they were a sample of convenience and because access was graciously provided by the college administration.

Data was collected via survey through the Office of Institutional Research and Assessment. An e-mail was sent to all undergraduates enrolled in the College of Education during the 2014 summer semester. The initial survey was followed by two subsequent reminder e-mails to encourage participation. Following the final reminder, professors in the College of Education teaching summer courses with undergraduates were contacted via e-mail to ask if they would allow the researcher to visit their classes to encourage participation. The researcher visited classes and students were encouraged via a verbal reminder to complete the survey. All student contact was IRB approved.

The strength of the survey method is that all students nineteen years of age or older enrolled in the College of Education during the 2014 summer semester had the same opportunity to participate in the survey. This equal opportunity for participation also allows for the reduction of the data as an overview of the population (Creswell, 2009). The weakness of this design is that this methodology only resulted in a relatively small sample of the population. By not conducting a longitudinal study because of student attrition and time constraints, the study only provides a limited understanding of how the general population is affected, which may in fact limit it's generalizability.

Instrumentation

Following approval of the Internal Review Board (IRB) at the large Southeastern University, the Office of Institutional Research and Assessment contacted students via e-mail.

Data was collected via Qualtrics, a software program that renders all survey response anonymous to the researcher.

The instrument was comprised of financial information, and sections of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia & McKeachie, 1991). Students were asked via a self-report survey about the average course load, number semesters in school, number of semesters until graduation, student GPA, parental income, and percentage of parental and student financial contribution toward their post-secondary experience. Student levels of contribution toward their post-secondary experience were determined based on the following: student employment, scholarships, loans and personal savings.

The study utilized three subscales from the MSLQ: motivation, cognitive learning strategies, and metacognitive self-regulation. Each subscale is divided into sections. The motivation subscale includes intrinsic goal orientation, extrinsic goal orientation, and task value. The cognitive learning strategies subscale includes rehearsal, organization, elaboration, critical thinking. The metacognitive self-regulation subscale was also used. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. It included: loans, scholarships, personal savings, summer employment, and employment during the school year. The MSLQ scales were scores based on the average across items measuring the construct and that the participants responded on a 7-point Likert-type scale. To assess validity, Pintrich used a confirmatory factor analysis (Pintrich, Smith, Garcia & McKeachie, 1991). The three value components that the researcher utilized in this study have Cronbach alphas that are as follows: intrinsic goal orientation = .74, extrinsic goal orientation = .62, task value = .90. Cognitive learning strategies subscales had Cronbach alphas that are as

follows: rehearsal = .69, elaboration = .76, organization = .64, critical thinking = .80. Metacognitive self-regulation had a Cronbach alpha of.79. Overall, the six subscales in the MSLQ have Cronbach's alphas that range from .52 to .93 (Pintrich, Smith, Garcia & McKeachie, 1991).

Validity

The MSLQ is an eighty-one item self-report measure that gauges a person's motivation and self-regulated learning. It was created from a 1982 through 1986 National Center for Research to Improve Post-Secondary Teaching and Learning Grant (Pintrich & Garcia, 1991). Using 1,000 University of Michigan students, McKeachie and Pintrich fine-tuned the MSLQ. The revisions to the MSLQ took place in three waves during 1986, 1987, and 1988 (Duncan & McKeachie, 2005). The first wave consisted of 326 students, the second wave in 1987 had 687 students and the third wave in1988 included 758 students. After each wave the researchers rewrote and refined the study. The final version, which was used by this study represented five years of work based on the various waves of data. (Pintrich, Smith, Garcia, and McKeachie, 1991). The instrument was created to collect data from college students about their motivational orientation and learning strategies. Duncan and McKeachie (2005) found that, "the MSLQ was developed using a social-cognitive view of motivation and learning strategies, with the student represented as an active processor of information whose beliefs and cognitions mediated important instructional input and task characteristics" (p. 117).

Each item was measured on a 7-point Likert-type scale, from 1 (not at all true of me) to 7 (very true of me). The theoretical model and operationalization in the MSLQ scales were test by two confirmatory analysis: one for the motivational scales and another set for the cognitive learning strategies and metacognitive strategy items. The confirmatory factor analysis required

the identification of which items (indicators) should fall into which factors (latent variables). The factor coefficient are similar to factor loadings in an exploratory factor analysis. (Pintrich, Smith, Garcia, & McKeachie, 1993). Factor coefficients for each latent variable are as follows:

Intrinsic Goal Orientation

1. In class, I prefer course material that really challenges me so I can learn new things. (.64)
16. In class, I prefer course material that arouses my curiosity, even if it is difficult to learn. (.69)
22. The most satisfying thing for me a course is trying to understand the content as thoroughly as possible. (.66)
24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade. (.55)

Extrinsic Goal Orientation

7. Getting a good grade in a class is the most satisfying thing for me right now. (.71)
11. The most important thing for me right now is improving my overall grade point average, so my main concern this semester is getting good grades. (.58)
13. If I can, I want to get better grades this semester than most of the other students. (.48)
30. I want to do well this semester because it is important to show my ability to my family, friends, employer, or others. (.44)

Task Value

4. I think I will be able to use what I learn in this course in other courses. (.57)

10. It is important for me to learn the course material in this class. (.64)

17. I am very interested in the content area of this course. (.88)

23. I think that course material in this class is useful for me to learn. (.86)

26. I like the subject matter of this course is very important to me. (.88)

Rehearsal

39. When I study for this class, I practice saying the material to myself over and over. (.62)

46. When studying for this course, I read my notes and the course readings over and over. (.63)

59. I memorize keywords to remind me of important concepts in this class. (.56)

72. I make list of important terms for this course and memorize the list. (.58)

Elaboration

53. When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions. (.60)

62. I try to relate ideas in this subject to those in to other courses whenever possible. (.60)

64. When reading for this class, I try to relate the material to what I already know. (.74)

67. When I study for this course, I write brief summaries of the main ideas from the readings and the concepts for the lectures. (.42)

69. I try to understand the material in the class by making connections between the readings and the concepts for the lectures. (.71)

81. I try to apply ideas from course readings in other class activities such as lectures and discussion. (.65)

Organization

32. When I study the readings for this course, I outline the material to help me organize my thoughts. (.57)

42. When I study for this course, I go through the readings and my class notes and try to find the most important ideas. (.55)

49. I make simple charts, diagrams, or tables to help me organize course material. (.45)

63. When I study for this course, I go over my class notes and make an outline of important concept. (.75)

Critical Thinking

38. I often find myself questioning things I hear or read in this course to decide if I find them convincing. (.49)

47. When a theory, interpretation, or conclusion is presented in class or in the readings, try to decide if there is good supporting evidence. (.76)

51. I treat the course material as a starting point and try to develop my own ideas about it. (.66)

66. I try to play around with ideas of my own related to what I am learning in this course. (.74)

71. Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives. (.67)

Metacognitive Self-Regulation

33. During class time I often miss important point because I'm thinking of other things. (.40)
36. When reading for this course, I make up questions to help focus my reading. (.44)
41. When I become confused about something I'm reading for this class, I go back and try to figure it out. (.47)
44. If course materials are difficult to understand, I change the way I read material. (.54)
54. Before I study new course material thoroughly, I often skim it to see how it is organized. (.53)
55. I ask myself questions to make sure I understand the material I have been studying for this class. (.58)
57. I often find that I have been reading for class but don't know what it was all about. (.35)
61. I try to think through a topic and decide what I am supposed to learn from it rather that just readings it over when studying. (.60)
76. When studying for this course I try to determine which concepts I don't understand well. (.61)
78. When I study for this class, I set goals for myself in order to direct my activities I each study period. (.55)
79. If I get confused taking notes in class, I make sure I sort it out afterwards. (.50)

(MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991)

To determine predictive validity, the MSLQ sub-scales were correlated with student's final course grades. As described by the authors, "the scale correlations with final grade are significant, albeit moderate, demonstrating, predictive validity" (Pintrich et al, 1991, p. 7). All

the sub-scales showed sound predictive validity. Given the other factors that affect course grades and which are not measured by the MSLQ, these significant yet modest correlations seemed reasonable. Course grades as a whole are not a very reliable measure of learning and performance but was the only source of student achievement available to the researchers (Pintrich & Smith, 1993).

Participants

The participants in the study were nineteen years of age or older and were enrolled in the College of Education during the 2014 Summer Semester. The survey included 64 participants. Income data was collected based on the 2013 Internal Revenue Service (IRS) tax bracket. Three percent (3%) of the student population reported that their parents made between $0–8,925, 9% of the student population reported that their parents made between $8,926–36,250, 19% of the student population reported that their parents made between $36,251–87,850, 54% of the student population reported that their parents made between $87,851–183,250, 9% of the student population reported that their parents made between $183,251–398,350, 7% of the student population reported that their parents made $398,351 or more. On average, the majority of participants said their parents and family contribute 59% of the cost of their post-secondary experience. This was followed by student loans (17%) then scholarships (12%).

The majority of the students were junior or seniors in the College of Education. Of the students that responded to the survey, 14% had been in school for six semesters; 20% had spent seven semesters in school; 9% had spent eight semesters in school; and 26% had been enrolled in school longer than ten semesters. Sixty-six percent (66%) of the students had less than two semesters until graduation.

Students' academic success as measured by GPA was used for the hierarchical multiple regressions. Of the students who responded to the survey, 2% had a cumulative GPA of 1.1–2.0; 8% had a cumulative GPA of 2.1–2.5, 20% had a cumulative GPA of 2.6–3.0; 45% had a cumulative GPA of 3.1–3.5, and 25% of the students who responded to the survey had a cumulative GPA of 3.6–4.0.

Data Screening and Check for Missing Data

Prior to testing the data, an initial screening for missing data was conducted to identify gaps. Only surveys of students who were over the age of nineteen were used in the study (n = 64); others were discarded (n = 6). The subscale questions were averaged together to create a variable average score. Those who were missing data from one question in the subscales had the missing data omitted and the remaining questions in that subscale section were averaged to create the variable average score. Student's grade point averages (GPA) were collected in six different categories. Categories are as follows: (1) 0-1.0, (2) 1.1-2.0, (3)2.1-2.5, (4) 2.6-3.0, (5) 3.1-3.5, (6) 3.6-4.0. There were zero participants for category 1. Therefore, it was not included in our analysis. There was only 1 participants for category 2. So, category 2 and 3 were calculated together. Dummy coding was used to categorize GPA during the hierarchical multiple regressions to control for academic success.

Data Analysis

Motivation

A simple regression analysis was used to address the research question asking whether or not student financial contribution predicted students' intrinsic goal orientation using the MSLQ. Intrinsic goal orientation represents the average of four items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their

post-secondary educational experience. The results indicated that weak positive relationship exists between student financial contribution and student intrinsic goal orientation (r = .293). For each one-point increase in student financial contribution, a .007 increase in student intrinsic goal orientation is seen (b = .007, p = .019). The coefficient of determination (r^2 = .086) indicates that approximately 9% of the variance in student extrinsic goal orientation can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 1

Descriptive Statistics of Variable Means and Standard Deviations: Intrinsic Goal Orientation

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Intrinsic Goal Orientation	4.91	1.00

To assess the hypothesis that student financial contribution predicts intrinsic goal orientation after controlling for student success as measured by GPA, we conducted a hierarchical multiple regression analysis with student financial contribution as the independent variable and intrinsic goal orientation as the dependent variable with student success being controlled. Variable means and standard deviation are reported in Table 2.

The R^2 (.194), with all variables in the equation, indicates that approximately 19% of the variance in intrinsic goal orientation can be accounted for by its linear relationship with students' contribution and GPA together. GPA was categorized and dummy coding was used to represent

the level of variable in the regression analysis. Table 2 displays the standardized beta weights, zero-order correlation, and the partial and semipartial correlations for each of the independent variables.

Table 2

Standardized Beta Weights (B), Zero-Order Correlations (r), Partial Correlations (pr), and Semipartial Correlations (sr) for Intrinsic Goal Orientation

Variable	B	R	Pr	Sr
Student Financial Contribution	.006	.293	.251	.233

Results were not statistically significant, F change (1,62) = 3.965, p = .051, indicating that students' contribution toward their post secondary educational experience does predict their intrinsic goal orientation above and beyond student academic success as measured by GPA.

A simple regression analysis was used to address the research question asking whether or not student financial contribution predicted students' extrinsic goal orientation using the MSLQ. Extrinsic goal orientation represents the average of four items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated that no relationship exists between student financial contribution and student extrinsic goal orientation, r = .166, b = .005, p = .189. The coefficient of determination (r^2 = .028) indicates that approximately 3% of the variance in student extrinsic goal orientation can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 3

Descriptive Statistics of Variable Means and Standard Deviations: Extrinsic Goal Orientation

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Extrinsic Goal Orientation	5.73	1.18

A simple regression analysis was used to address the research question asking whether or not student financial contribution toward the post-secondary experience predicted student's task value using the MSLQ. Task value represents the average of five items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated that no relationship exists between student financial contribution and student task values, $r = .113$, $b = .003$, $p = .373$. The coefficient of determination ($r^2 = .013$) indicates that approximately 1% of the variance in student task value can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 4

Descriptive Statistics of Variable Means and Standard Deviations: Task Value

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Task Value	6.13	.89

Cognitive Learning Strategies

A simple regression analysis was used to address the research question asking whether or not student financial contribution toward the post-secondary experience predicted students' rehearsal strategies using the MSLQ. Rehearsal represents the average of four items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated that a weak negative relationship exists between student financial contribution and student rehearsal strategies, $r = .204$. For each one-point increase in student financial contribution, a .006 decrease in student rehearsal strategies is seen, $b = .006$, $p = .106$. The coefficient of determination ($r^2 = .042$) indicates that approximately 4% of the variance in student rehearsal strategies can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 5

Descriptive Statistics of Variable Means and Standard Deviations: Rehearsal

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Rehearsal	5.19	1.12

A simple regression analysis was used to address the research question asking whether or not student financial contribution toward the post-secondary experience predicted students' elaboration strategies using the MSLQ. Elaboration represents the average of six items measured

on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated that a weak negative relationship exists between student financial contribution and student elaboration strategies, r = .246. For each one-point increase in student financial contribution, a .006 decrease in student elaboration strategies is seen, b = .006, p = .050. The coefficient of determination (r^2 = .060) indicates that approximately 6% of the variance in student elaboration strategies can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 6

Descriptive Statistics of Variable Means and Standard Deviations: Elaboration

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Elaboration	5.05	.97

To assess the hypothesis that student financial contribution predicts student elaboration after controlling for student success as measured by GPA, we conducted a hierarchical multiple regression analysis with student financial contribution as the independent variable and elaboration as the dependent variable, with student success being controlled. Variable means and standard deviation are reported in Table 6.

The R^2 (.087), with all variables in the equation, indicates that approximately 8% of the variance in elaboration can be accounted for by its linear relationship with student's contribution and GPA together. GPA was categorized and dummy coding was used to represent the level of

variable in the regression analysis. Table 9 displays the standardized beta weights, zero-order correlation, and the partial and semipartial correlations for each of the independent variables.

Table 7

Standardized Beta Weights (B), Zero-Order Correlations (r), Partial Correlations (pr), and Semipartial Correlations (sr) for Elaboration

Variable	B	R	Pr	Sr
Student Financial Contribution	.006	.246	.255	.252

Results were statistically significant, F change (1,62) = 4.11, p = .047, indicating that students' contribution toward their post secondary educational experience does predict their elaboration above and beyond student success as measured by GPA.

A simple regression analysis was used to address the research question asking whether or not student financial contribution toward the post-secondary experience predicted students' organization using the MSLQ. Organization represents the average of four items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated no relationship exists between student financial contribution and student organization strategies, r = .118, b = .004, p = .351. The coefficient of determination (r^2 = .014) indicates that approximately 1% of the variance in student organization strategies can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 8

Descriptive Statistics of Variable Means and Standard Deviations: Organization

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Organization	4.61	1.33

A simple regression analysis was used to address the research question asking whether student financial contribution toward the post-secondary experience predicted students' critical thinking using the MSLQ. Critical thinking represents the average of five items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated no relationship exists between student financial contribution and student critical thinking, $r = .117$, $b = .004$, $p = .358$. The coefficient of determination ($r^2 = .014$) indicates that approximately 1% of the variance in student critical thinking can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 9

Descriptive Statistics of Variable Means and Standard Deviations: Critical Thinking

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Critical Thinking	4.55	1.43

Metacognitive Self-regulation

A simple regression analysis was used to address the research question asking whether student financial contribution toward the post-secondary experience predicted students' metacognitive self-regulation using the MSLQ. Metacognitive self-regulation represents the average of eleven items measured on a 7-point Likert-type scale. Student financial contribution was a percent based on students' contribution toward their post-secondary educational experience. The results indicated no relationship exists between student financial contribution and student metacognitive self-regulation, $r = .221$, $b = .005$, $p = .080$. The coefficient of determination ($r^2 = .049$) indicates that approximately 5% of the variance in student metacognitive self-regulation can be accounted for by its linear relationship with scores from student financial contribution towards their post-secondary experience.

Table 10

Descriptive Statistics of Variable Means and Standard Deviations: Metacognitive Self-regulation

Variable	Mean	Standard Deviation
Student Financial Contribution	41.64	40.40
Metacognitive Self-regulation	4.50	.98

Summary

The results of multiple simple regression analyses sought to investigate the relationship between student financial contribution to their secondary education and their motivation, cognitive learning strategies, and metacognitive self-regulation. Student intrinsic motivation was found to be statistically significant ($p = .019$), stating that the more that students contribute toward their post-secondary experience, the more intrinsically motivated they become. However, student intrinsic motivation was not found to be statistically significant ($p = .051$) when controlling for academic success. However, over 5% of varenace can be accounted for by its linier relationship with student financial contribution after controlling for GPA. Student elaboration strategies were found to be statistically significant ($p = .050$) stating that as students' contribution toward their post-secondary experience increases so do their elaboration abilities. Student elaboration strategies were also found to be statistically significant ($p = .047$) stating that as students' contribution toward their post-secondary experience increases so do their elaboration abilities when controlling for academic success as measured by GPA . No other statistically significant findings were revealed during the study based on the research questions presented.

Based on the provided analysis, students' contribution toward their post-secondary educational experience does appear to be a factor in predicting student intrinsic goal orientation.

Elaboration was the only cognitive learning strategy that was significantly affected by student financial contribution. Hierarchical multiple regressions were run to control for student academic success as measured by GPA to further investigate the extent of student financial contribution and intrinsic goal orientation and elaboration. Intrinsic goal orientation ($p = .051$) was not statistically significant after controlling for academic success as measured by GPA. However, elaboration ($p = .047$) was found to be statistically significant after controlling for academic success as measured by GPA.

CHAPTER V. SUMMARY, CONCLUSION, AND RECOMMENDATION

The purpose of this chapter is to discuss the results gathered throughout the present study and its potential implications. It will provide an introduction and a restating of the study design and procedures. The discussion will include a restating of the purpose and the procedures used in the present study. An analysis of each research question using the data collected will be provided. Future research implications will be provided as well. Finally, conclusions will be given with recommendations for implication of the findings.

Introduction

The study was conducted using a quantitative survey research methodology method via survey using the College of Education listserv from the Office of Institutional Research and Assessment. The survey collected information regarding student course load, financial information, and it used subscales from the Motivated Strategies of Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991). All 564 students enrolled in the College of Education during the 2014 summer semester received the survey via e-mail. In the state the study was conducted, students under the age of nineteen cannot legally participate in surveys unless parental consent is collected. Students under the age of nineteen were excluded because college freshman do not have a firm grasp on their financial situation (Simpson, Smith, Taylor, & Chadd, 2012). After the data was collected, multiple simple regressions were run to provide insights into the research questions. Two of the research questions were found to be statistically

significant and hierarchical multiple regressions were run to control for academic success as measured by GPA.

The two separate simple regressions revealed that there was a significant relationship between student financial contribution toward their post-secondary educational experience and intrinsic goal orientation ($p = .019$) and student financial contribution toward their post-secondary educational experience and elaboration ($p = .050$). No other significant relationship was discovered between student financial contribution and any of the other subcategories of student motivation, cognitive learning strategies, and metacognitive self-regulation.

To more clearly define the extent that student financial contribution affects intrinsic goal orientation and elaboration, hierarchical multiple regressions were performed. Students intrinsic goal orientation was not found to be statistically significant ($p = .051$) when controlling for academic success as measured by GPA. Student elaboration strategies was found to be statistically significant ($p = .047$) when controlling for academic success as measured by GPA.

Theoretical Framework

The Motivated Strategies for Learning Questionnaire (MSLQ) was designed using a social cognitive view of motivation (MSLQ; Pintrich, Smith, Garcia, & McKeanchie, 1991). It finds that students' motivation is linked to their ability to utilize cognitive and metacognitive self-regulation. By using these strategies, students learn to self-regulate their behavior to assist them in achieving a goal, as self-regulation results from the synergy of cognition and motivation (Pintrich, 1989). Students' self-efficacy influences the cognitive learning strategies that are employed and thus the students' belief about a task and academic success (Duncan & McKeanchie, 2005). This study utilized subscales of the MSLQ in an effort to investigate how

student financial contribution toward post-secondary experiences affects student motivation, cognitive learning strategies, and metacognitive self-regulation among students.

Findings

The present study was conducted using a survey research methodology. The survey was distributed through the Office of Institutional Research and Assessment. The participants were sent an initial e-mail with two follow-up e-mails. There were sixty-four complete responses. The results reflected students' contributions to their post-secondary educational experience and their motivation, cognitive learning strategies, and metacognitive self-regulation. Student intrinsic motivation was found to be statistically significant ($p = .019$) finding that the more that students contribute financially toward their post-secondary experience, the more intrinsically motivated they become when controlling for student academic success as measured by GPA. To further measure the extent that student financial contribution predicts intrinsic goal orientation, a hierarchical multiple regression was conducted to control for academic success as measured by GPA. It was found that it was not statistically significant ($p = .051$) when GPA was controlled. Student elaboration strategies was found to be statistically significant ($p = .050$) stating that as student financial contribution to their post-secondary experience increases so do their elaboration abilities. To further measure the extent that student financial contribution predicts elaboration, a hierarchical multiple regression was conducted to control for academic success as measured by GPA. It was found that it was still statistically significant ($p = .047$) when GPA was controlled. No other statistically significant findings were revealed during the present study based on the research questions presented.

The study did not find any significant findings involving the other MSLQ subscales that were analyzed in the present study: extrinsic motivation ($p = .189$) and task value ($p = .373$);

cognitive learning strategies: rehearsal (p = .106), organization (p = .351), and critical thinking (p = .358); metacognitive self-regulation (p = .08). However, the lack of significant findings did reveal many interesting facts regarding the effect of motivation on students. One such factor is that there is a lack of change in student extrinsic goal orientation. Both students who have their post-secondary experience paid for by their parents and those who pay for their own post-secondary experience are equally extrinsically motivated.

Students who contribute more toward their post-secondary educational experience are more intrinsically motivated and utilize higher-order cognitive learning strategies. To explain these results, it may be relevant to consider the behavior of the students who take the initiative to attend college knowing they are going to incur the majority of the financial responsibility.

Ryan and Deci (2000) found that intrinsic motivation results in high-quality learning and creativity. By identifying these students, universities could implement interventions to end the proliferation of reliance upon extrinsic motivators to create better learners. Therefore, interventions that shift the mentality of learners from extrinsic to intrinsic would provide a service to the learner.

Limitations

The study was limited because it focused only on undergraduates enrolled in the College of Education at a large Southeastern University. The sample for this study is a convenience sample. Participants were not randomly selected – they were chosen based on their agreement to participate in an online survey. Therefore, the sample may not reflect the general population. Edwards (1957) also proposes that students respond to surveys based on their need for social desirability. Social desirability is the need to receive approval and acceptance from peers. This poses many validity questions about self-report surveys. Winne and Perry (2000) find that when

students are asked to self-report, they cannot be completely objective. Self-report leaves open the option for misinformation, even though it might not be intentional.

Implications

The present study found that intrinsic motivation (p=.019) and elaboration (p=.050) were found to be statistically significant. Elaboration was found to be statistically significant when controlling for academic success as measured by GPA (p=.047). This study has found that students who contribute toward their post-secondary educational experience have increased intrinsic motivation. This is important because students with higher intrinsic motivation are more likely to perform better in school (D'Lima, Winsler & Kitsantas, 2014; Freudenthaler, Spinath, & Neubauer, 2008; Hamilton, 2013). This implication that students with higher intrinsic motivation perform better in school would lead the researchers to believe that if students contribute more towards their post-secondary educational experience they will be more academically successful. This might also serve as a guide for parents, university officials, and other invested parties to encourage a level of student financial contribution to help students increase their intrinsic motivation.

This increase can also be explained because students learn best when the material they are learning has personal meaning and is tailored to their particular interests (Zemke & Zemke, 1988). The students who participated in the present study were enrolled in the College of Education and working on their college majors and would have found more interest in the material they were studying, therefore, increasing their intrinsic motivation. The findings of the present study found that as student personal spending on post-secondary education increases, so does their motivation to learn. This is a novel idea that corroborates the accepted thought that

intrinsic motivation is very beneficial to students academically (D'Lima, Winsler & Kitsantas, 2014; Freudenthaler, Spinath, & Neubauer, 2008).

Student extrinsic motivation is found to be a bi-product of the high school system in the United States. Students are rewarded with grades and credit for advancement. However, as most students travel through their college careers, those who are extrinsically motivated either drop-out or change their motivational strategies to become academically successful (Thompson & Thornton, 2002). Students learn best when they find meaning in the material they are learning that is tailored to their particular interests (Zemke & Zemke, 1988). College courses are more tailored to student's particular interest and, therefore, increases students' intrinsic motivation. This was found true in the present study because the majority of the students were at the end of their college careers and were enrolled in classes that tailored to their particular majors, which would lead them to be more intrinsically motivated, thus lowering their extrinsic motivation.

The present study found that elaboration was the only cognitive learning strategy that was statistically significant. To the author's knowledge there is no research expounding on the increased use of elaboration due to student financial contribution. This novel idea is important because it follows the trend that students who find more interest in the materials they are learning can use prior knowledge to activate elaboration.

Rehearsal is a lower order cognitive function. It is found that the more that students believe that they can learn the more likely they are to use cognitive learning strategies (Paulsen & Feldman, 2007). The present study found that student financial contribution saw a decrease in student rehearsal. This could potentially mean that as students contribute more to their secondary education, they are more likely to use higher-order cognitive learning strategies.

The present study found no relationship between the organization, critical thinking, and metacognitive self-regulation and student financial. Organization and behavioral regulation are classified as executive skills. They are classified as executive skills because they are associated with the development of the frontal lobes and are considered higher-order functions (Blair, Zelazo, & Greenberg, 2005; Barkley, 2008).

The lack of relationship between organization and student financial contribution could exist because organization is not a directly affected by students' financial contribution to their post-secondary learning experience. Student financial contribution might not directly affect students because at this point in their academic careers students are already set in their organizational habits. Organization is taught in middle and high school to help students develop a functional understanding of its importance (Boller, 2008). The present study found that organization was not affected by student financial contribution; this could be attributed to Boller's (2008) findings that organization is a vital part of learning that can be sculpted early on and therefore might already be a permanent structure in students' academic lives.

Executive skills such as behavioral regulation, memory, time management, and organization are susceptible to genetic and environmental influences (Blair, Zelazo, & Greenberg, 2005). They are also are associated with the frontal lobes (Barkley, 2008). Since they are associated with the frontal lobes, which are not fully developed until later adolescence and are influenced by genetic and environmental factors, the lack of relationship between organization in this study and student financial contribution can be explained by lack of cognitive awareness of the learning strategy as an important aspect of learning because it is already entrenched into students learning competences.

No relationship was found between critical thinking, metacognitive self-regulation, and student financial contribution. This could be because student financial contribution toward their post-secondary education does not affect all higher-order cognitive functions. Also, since the frontal lobes are not fully developed until later adolescence, it could be that student financial contribution does not affect critical thinking and metacognitive self-regulation because the thought patterns are already in place for students.

Recommendations for Future Research

Based on the literature review, there are many different facets to financial motivation, cognitive learning strategies, and metacognitive self-regulation. This study determined that student financial contribution toward their post-secondary experience does predict student intrinsic goal orientation ($p = .019$) and elaboration ($p = .050$). Students who contribute to their post-secondary educational experience are more intrinsically motivated. Therefore, they are more invested in the learning process and find value in what they are learning.

Most importantly, it provides insight into the effects of the student financial contribution toward post-secondary education on student motivation, cognitive learning strategies, and metacognitive self-regulation. To the best of the researcher's knowledge, there remains a paucity in the research on the effects of student financial contribution toward their post-secondary educational experience. By attempting to fill the void this study has found that students who contribute toward their post-secondary educational experience have more intrinsic motivation. This is important because students with higher intrinsic motivation are more likely to perform better in school (D'Lima, Winsler & Kitsantas, 2014; Freudenthaler, Spinath, & Neubauer, 2008; Hamilton, 2013). This implication that students with higher intrinsic motivation perform better in school would lead the researchers to believe that if students

contribute more towards their post-secondary educational experience, they will be more academically successful. This might also serve as a guide for parents looking to fund their students' post-secondary educational experience by encouraging them to take the 'less is more' approach to educational funding that was proposed by Hamilton (2013). More research needs to be conducted to expand upon these ideas.

In college students, higher levels of performance were correlated with intrinsic goal orientation, task value, and self-efficacy (Garci & Pintrich, 2000). The present study found this to be true, which would allow for the researcher to assume that any way universities and parents should promote that intrinsic goal orientation could be increased.

Lynch (2010) found correlations between course grade, self-efficacy, intrinsic and extrinsic motivation, and task value in an undergraduate physics course. The present study found as study contributions increase so does intrinsic motivation. Therefore, student financial contribution increases course grades. Further research needs to be done to define the parameters of the amount of student financial contribution that increases student intrinsic motivation. This information would be vital to parents, universities, and other involved parties when trying to encourage student financial involvement in secondary education.

Intrinsic motivation is a predictor of students' performance on reading exams in poor readers. It does not affect high performing readers as much as lower preforming students (Logan, Medford, Hughes, 2011). Therefore, students who are struggling in a subject, such as reading, can benefit from having intrinsic motivation. If this is possible for younger students, it should still be applicable for older students in the same subjects (Logan, Medford, Hughes, 2011).

Intrinsic motivation also explained the growth of reading comprehension in elementary age children (Logan, Medford, & Hughes, 2010). This is a vital contributing factor for academic

success not only for children but also for adults. Reading comprehension is a vital building block for self-efficacy in academics (Shell, Murphy & Bruning, 1989). If children have increased intrinsic motivation in reading, they are more likely to perform better in school which in turn will increase college students' ability to perform better as adult learners. This is important not only for American students but for all students in the United States and abroad.

This study provided further evidence for the need of a replication study using a larger sample size, which would allow for the incorporation of additional variables that predict the effects of student financial contribution toward their post-secondary educational experience. Also, comparing the motivations, cognitive learning strategies, and metacognitive self-regulation of students across multiple majors would provide more insight as to why intrinsic goal orientation is impacted by student financial contribution.

A longitudinal study would expand upon the ideas of this study by looking at the long-term effects of student financial contribution toward their post-secondary experience and job preparedness or future earnings would provide interesting insight into the long-lasting effects of student financial contribution. A follow-up study that encompasses all academic majors would also provide a holistic view of the impact of student financial contribution toward post-secondary education.

The present study did not find statistical significance between student financial contribution and extrinsic goal orientation, task value, organization, rehearsal, or critical thinking. However, extrinsic goal orientation, cognitive learning strategies, and metacognitive self-regulation are still important to student success and further research should be conducted to identify the way that these factors can be positively affected to help students perform better academically.

This study shows the need for future researchers to perform a series of qualitative interviews to shed light into the issues surrounding student financial contribution and motivation, cognitive learning strategies, and metacognitive self-regulation. This would provide valuable insight into the variables that reached statistical significance and expand upon the ideas that failed to reach statistical significance presented in this study while perhaps allowing for triangulation of the research findings.

Conclusion

The steep increase in tuition is a new phenomenon that has occurred in the last few decades. As more people attend college and the demand to do so increases, so does the cost. This area has not been fully investigated, and this study attempted to help fill that void by providing vital information toward the understanding of many different facets of the issue. In conclusion, this study has found that as students contribute more toward their post-secondary experience, their intrinsic goal orientation increases. There is a direct financial link between student intrinsic goal orientation, elaboration, and student financial contribution toward their post-secondary experience, thus allowing for deeper understanding and retention of learned material. Students, parents, and other interested parties should take this into account when paying for post-secondary education because the presence of intrinsic goal orientation signifies the higher academic success and learning.

REFERENCES

Ames, C. (1992). Achievement goals, motivational climate, and motivational processes. In G.C. Roberts (Ed.), *Motivation in sports and exercise* (pp. 161–176). Champaign, IL: Human Kinetics.

Anderson, E. S., & Keith, T. Z. (1997). A longitudinal test of a model of academic success for at-risk high school students. *Journal of Educational Research, 90,* 259–268.

Atkinson, R., & Shiffrin, R. M.(1971). *The control processes of short-term memory*. Stanford, CA: Stanford University Institute for Mathematical Studies in the Social Sciences.

Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In K. W. Spence (Ed.), *The psychology of learning and motivation,* (pp. 89–195). New York, NY: Academic Press.

Babbie, E. R. (1990). *Survey research methods* (2nd ed.). Belmont, CA: Wadsworth.

Bandura, A. (1963). The role of imitation in personality development. *Journal of Nursery Education, 18*(3), 207–215.

Bandura, A. (1977). *Social learning theory*. New York, NY: General Learning Press.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28,* 117–148.

Bembenutty, H. (2007). Self-regulation of learning and academic delay of gratification. *Journal of Advanced Academics, 18*(4), 586-616.

Bennett, W., & Wilezol, D. (2013). *Is college worth it?* Nashville: Thomas Nelson.

Benson, J. (1998). Review of the motivated strategies for learning questionnaire. In J. C. Impara & B. S. Plake (Eds.), *The thirteenth mental measurements yearbook*. Buros Institute of Mental Measurements: Lincoln, NE.

Blair, C., D. Zelazo, and M. Greenberg. (2005). The measurement of executive function in early childhood. *Developmental Neuropsychology, 28*(2), 561–71.

Boller, B. (2008). Teaching organizational skills in middle school: Moving toward independence. *The Clearing House.* 169-171.

Bryan, G., & Whipple, T. (1995). Tuition elasticity for higher education among current students: A pricing model. *Journal of Higher Education, 66*(5), 560–574.

Byrnes, J.P. (2003). Factors predictive of mathematic achievement in white, black, and Hispanic 12th graders. *Journal of Educational Psychology, 95,* 316-326.

Cheng, G. & Chau, J. (2003) Exploring the relationship between students' self-regulated learning ability and eportfolio achievement. *Internet and Higher Education. 17,* 9-15.

Cook, R., Barkham, M., Audin, K., Bradley, M., & Davy , J. (2004). Student debt and its relation to student mental health. *Journal of Further and Higher Education, 28*(1), 53–66. doi: 10.1080/0309877032000161814

Craik, F., & Lockhart, R. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Thinking and Verbal Behavior, 11,* 671–684.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Lincoln, NE: SAGE Publications.

Cubie, A. (1999). The independent committee of inquiry into student finance. *The Cubie Report.*

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18,* 105–115.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and human self-determination in human behavior*. New York, NY: Plenum.

Deci, E. L., & Ryan, R. M. (2012). Motivation, personality, and development within embedded social contexts: An overview of self-determination theory. In R. Ryan (Ed.), *The Oxford handbook of human motivation*. Oxford, England: Oxford University Press.

Digest of Educational Statistics. (2009). *Recent high school completers and their enrollment in college, by sex: 1960 through 2008*. Washington, DC.

Dillion, C., & Greene, B.A., (2003) Learner differences in distance education: Finding differences that matter. In M. Moore & B. Anderson (Eds.), *Handbook of distance learning.* Mahwah, NJ: Erlbaum.

D'Lima, G. M., Winsler, A., & Kitsantas, A. (2014). Ethnic and gender differences in first-year college students' goal orientation, self-efficacy and extrinsic and intrinsic motivation. *Journal of Educational Research, 107*(5), 341–356. doi: 10.1080/00220671.2013.823366

Dotterweich, D., & Baryla, E. (2005). Non-resident tuition and enrollment in higher education: Implications for tuition pricing. *Education Economics, 13*(4), 375–385. doi: 10.1080/09645290500251631

Duncan, T. G., & McKeachie, W. J. (2005). The making of the motivated strategies for learning questionnaire. *Educational Psychologist, 40*(2), 117–128.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist, 41,* 1040–1048.

Dweck, C. S., & Elliott, E. S. (1983). Achievement motivation. In P. Mussen & E. M. Hetherington (Eds.), *Handbook of child psychology* (pp. 643–691). New York: Wiley.

Dweck, C. S., & Master, A. (2009). Self-theories and motivation: Students beliefs about intelligence. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 1–8). New York: Routledge.

Ee, J., Moore,P.J., & Atputhasamy, L. (2003). High-achieving students: Their motivational goals, self-regulation and achievement and relationships to their teachers' goals and strategy based instruction. *High Ability Studies, 14.* 23-39.

Edwards, A. L. (1957). *The social desirability variable in personality assessment and research.* New York, NY: Dryden.

Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34*, 169–189.

Elliot, A. J., Cury, F., Fryer, J. W., & Huguet, P. (2006). Achievement goals, self-handicapping, and performance attainment: A meditational analysis. *Journal of Sport Exercise and Psychology, 28,* 344–361.

Fethke, G. (2006*).* Subsidy and tuition policies in public higher education. *Education Economics, 44*(4), 644–655.

Fishman, E.J. (2014). With great control comes great responsibility: The relationship between perceived academic control, student responsibility, and self-regulation. *British Journal of Educational Psychology*, 84, 685-702.

Fredenthaler, H., Spinath, B., & Neubauer, A. (2008). Predicting school achievement in boys and girls. *European Journal of Personality, 22*(3), 231–245.

Garcia, T., & Pintrich, P.T. (2000). The effects of autonomy on motivation and performance in the college classroom. *Contemporary Educational Psychology, 21*(4), 477-486.

Gredler, M. (2009). *Learning and instruction: Theory into practice* (6th ed.). Upper Saddle River, NJ: Pearson.

Hamilton, L. T. (2013). More is more or more is less? Parental financial investment during college. *American Sociological Review, 78*(1), 70–95.

Heikkila, A., Lonka, K. (2006). Studying in higher education: Students' approaches to learning, self-regulation, and cognitive strategies. *Studies in Higher Education, 31*(1), 99-117.

IPSOS, Public Affairs. (2013). *How America pays for school*. Newark, NJ: Sallie Mae.

James, W. (1890). *The principles of psychology.* New York: Henry Holt.

Kim, M., Rhodes, G., & Woodard, D. (2003). Sponsored research versus graduating students? Intervening variables and unanticipated findings in public research universities. *Research in Higher Education, 44*(1), 51–60.

Kovacic, M.P., Galic, Z., & Jerneic, Z. (2014). Social desirability scales as indicators or self-enhancement and impression management. *Journal of Personality Assessment, 96*(5), 532-543. doi: 10.1080/00223891.2014.916714.

Lapan, R. T, Kardash, C. M., & Tumer, S. (2002). Empowering students to become self-regulated learners, *Professional School Counseling*, 5, 257-266.

Ley, K., & Young, D.B.(1998). Self-regulation behaviors in underprepared (developmental) and regular admission college students. *Contemporary Educational Psychology, 23*, 42-64.

Logan, S., Medford, E., & Hughes, N. (2011). The importance of intrinsic motivation for high and low ability readers' reading comprehension performance. *Leaning and Individual Differences, 21(1),* 124–128. doi: 10.1016/j.lndif.2010.09.011.

Lynch, D.J. (2010). Motivational beliefs and learning strategies as predictors of academic performance in college physics. *College Students Journal,* 44(4), 920-927.

Maehr, M. L., & Anderman, E. (1993). Reinventing schools for early adolescence: Emphasizing task goals. *Elementary Schools Journal, 93*, 593–610.

Massa, R., & Parker, A. (2007). Fixing the net tuition revenue dilemma: The Dickinson college story. *New Direction for Higher Education, 140*, 87–95.

McClendon, R.C. (1996). Motivation and Cognition of Preservice Teachers: MSLQ. *Journal of Instructional Psychology, 23*(3), 216-224.

McKeachie, W. J., Pintrich, P. R., Lin, Y-G., Smith, D. A. F., & Sharma, R. (1990). *Teaching and learning in the college classroom: A review of the research literature* (2nd ed.). Ann Arbor, MI: NCRIPTAL, University of Michigan.

Metallidou, P., & Vlachou, A. (2010). Children's self-regulated learning profile in language and mathematics: The role of task value beliefs. *Psychology in The Schools, 47*(8), 776-788.

Middleton, M., & Midgley, C. (1997). Avoiding the demonstration of lack or ability: An under-explored aspect of achievement goal theory. *Journal of Educational Psychology*, 89, 710-718.

Miller, B. (2010). The price of higher education: How rational is british tuition fee policy? *Journal of Higher Education Policy and Management, 32*(1), 85–95. doi: 10.1080/13600800903440576.

Miller, D.(2015). Learning how students learn: An exploration of self-regulation strategies in a two-year college general chemistry class. *Two-year community, 44*(3), 11-16.

Miller, N., & Dollard, J. (1941). *Social learning and imitation*. New Haven, CT: Yale University Press.

Mischel, W., Shoda, Y., & Rodriguez, M. (1989). Delay of gratification in children. *Science, New Series*, *244*(4907), 933–938.

Moen, R., & Doyle, K. (1978). Measures of academic motivation: A conceptual review. *Research in Higher Education, 8*(1), 1–23.

Moos, D.C. (2009). Note-taking while learning hypermedia: cognitive and motivational considerations. *Computers in Human Behavior, 25*, 1120-1128. doi: 10.1016/j.chb.2009.05.004.

Motivation [Def. 2]. (n.d.). In *Merriam Webster Online.* Retrieved February 20, 2014, from http://www.merriam-webster.com/dictionary/citation

Mullin, C., & Honeyman, D. (2008). Statutory responsibilities for fixing tuition and fees: Community colleges and undergraduate institutions. *Community College Journal of Research and Practice*, (32), 284–304.

Mullen, A. L., Goyette, K. A., & Soares, J. A. (2003). Who goes to graduate school? Social and academic correlates of education continuation after college. *Sociology of Education 76*(2), 143–169. doi: 10.2307/3090274.

National Center for Educational Statistics, U.S. Department of Education. (2010). 2008–2009 longitudinal study baccalaureate and beyond. In Digest of Educational Statistics 2010 (Chap 4). Retrieved May 4, 2013, from the National Center for Educational Statistics Web site: http://nces.ed.gov/pubs2011/2011236.pdf

National Center for Educational Statistics, U.S. Department of Education Institute of Educational Sciences. (2013). Retrieved May 4, 2013 from the National Center for Educational Statistics Web site: http://nces.ed.gov/ipeds/glossary/

Nicholls, J. G. (1989). *The competitive ethos and democratic education.* Cambridge, MA: Harvard University Press.

Nickerson, R., Perkins, D. N., & Smith, E. (1985). *The teaching of thinking*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Paulsen, M.B. & Feldman, K.A. (2007). The conditional and interaction effects of epistemological beliefs of the self-regulated learning of college students: Cognitive and behavioral strategies. *Research in Higher Education*. 48(3), 353-401.

Pintrich, P. R. (2000a). The role of goal orientation in self-regulated learning, In M. Boekerts, P. R. Pintrich & M. Zeidner (Eds.), *Handbook of self-regulation (*pp. 451–502). San Diego, CA: Academic Press.

Pintrich, P. R. (2000b). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology, 9*(3). doi: 10.1037/0022-0663.92.3.544

Pintrich, P.R. (1989). The dynamic interplay of student motivation and cognition in the college classroom. Inc. Ames, & M. Maehr, *Advances in motivation and achievement: Motivation enhancing environments,* vol. 6. (pp. 117-160). Greenwich, CT: Jai Press

Pintrich, P. R., & de Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82,* 33–40.

Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. Maehr & P. R. Pintrich (Eds.), *Advances in achievement: Goals and self-regulatory processes* (p. 7). Greenwich, CT: JAI Press.

Pinrich, P. R., & Schrauben, B. (1992). Student's motivational beliefs and their cognitive engagement in classroom tasks. In D. Schunk & J. Meence (Eds.), *Student perception in the classroom*. Mahwah, NJ: First Publishing Co.

Pintrich, P.R., & Schunk, D. (2002) *Motivation in education: Theory, research, and applications* (2nd ed). Upper Saddle, NJ: Prentice-Hall, Inc.

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). A manual for the use of the motivated strategies for learning questionnaire (MSLQ). Ann Arbor, MI: National Center for Research to Improve Postsecondary Teaching and Learning.

Pintrich, P. R., & Smith, D. A. F. (1993). Reliability and predictive validity of the motivated strategies for learning questionnaire (MSLQ). *Educational and Psychological Measurement*, 53, 801-813.

Richardson, J., & Newby, T. (2010). The role of students' cognitive engagement in online learning. *American Journal of Distance Learning*, *20*(1), 23–37. doi: 10.1207/s15389286ajde2001_3

Rotgans, J. I., & Schmidt, H. G. (2010). The motivational strategies for learning questionnaire: A measure for students' general motivational beliefs and learning strategies. *The Asia-Pacific Education researcher, 19*(2), 357–369.

Ryan, R. M. (1982) Control and information in the interpersonal sphere: An extension of Cognitive evaluation theory. *Journal of Personality and Social Psychology, 43(*3), 450–461.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54–67. doi:10.1006/ceps.1999.1020

Schunk, D., & Usher, E. L. (2012). Social cognitive theory and motivation. In R. Ryan (Eds.), *The oxford handbook of human motivation* (pp. 13–27). New York, NY: Oxford University Press.

Schunk, D. H., & Zimmerman B. J. (1994). Preface. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. ix–xi). Hillside, NJ: Erlbaum.

Schunk, D. H., & Zimmerman, B. J. (1997). Social origins of self-regulatory competence. *Educational Psychologist, 32,* 195–208.

Selingo, J. (2013). *College (un)Bound: The future of higher education and what this means for students*. New York: Houghton Mifflin Publishing Company.

Senecal, C., Koestner, R., & Vallerand, R.J. (1995). Self-regulation and academic procrastination. *The Journal of Social Psychology,* 135(5), 607-619.

Shell, D. F., Murphy, C. C., & Bruning, R. H. (1989). Self-efficacy and outcomes expectance mechanism in reading and writing achievement. *Journal of Educational Psychology, 8*(1), 91–100. doi: 10.1037/0022-0663.81.1.91

Simpson, L., Smith, R., Taylor, L., & Chadd, J. (2012). College debt: An exploratory study of risk factors among college freshman. *Journal of Student Financial Aid, 42*(1), 16–27.

Stack, C., & Vedvik, R. (2011). *The financial aid handbook: Getting the price you want for the price you can afford*. Franklin Lakes, NJ: Career Press.

Stanley, M. (2003). College education and the midcentury GI bills. *The Quarterly Journal of Economics*, *118*(2), 671–708. doi: 10.1162/003355303321675482

Steelman, L. C., & Powell, B. (1991). Sponsoring the next generation: Parental willingness to pay for higher education. *American Journal of Sociology, 96*(6), 1505–1529.

Strom, P. S., & Strom, R. D. (2004). Entitlement: The coming debate on higher education. *The Educational Forum*, *68*(4), 325–335. doi: 10.1080/00131720408984648

Thompson, B.R. & Thornton, H.J. (2002). The transition from extrinsic to intrinsic motivation in the college classroom: A first year experience. *Education.* 122(4). 785-792.

United States Census Bureau. (2013, May 10). *National Census Survey 2010.* Allegany County, N.Y. Retrieved May 10, 2013 from http://www.census.gov/hhes/www/income/data/inequality/middleclass.html

Urdan, T., & Turner J. C. (2005). Competence motivation in the classroom. In A. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 297–317). New York: Guilford Press.

U.S. News & World Report. (2009). *Best national universities*, *146*(8), 84–88.

VanderStoep, S.C., Pintrich, P.R., Fagerlin, A. (1996). Disciplinary differences in self-regulated learning in college students. *Contemporary Educational Psychology*, 21, 345-362.

Walker, C., Greene, B., & Mansell, R. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. Learning and Individual Differences, *16*(1), 1–12.

Weinstein, C., & Mayer, R. (1986). The teaching of learning strategies. In M. Wittrock (Ed.), *The handbook of research on teaching* (pp. 315–327). New York, NY: Macmillan.

Wentzel, K. R., & Wigfield, A. (2009). *Handbook of motivation in school*. New York, NY: Taylor and Francis

White, R. W. (1959). Motivational reconsidered. *Psychological Review*, *66*, 297–333.

Wigfield, A., Cambria, J., & Eccles, J. S. (2012). Motivation in education. In R. C. Ryan (Ed.), *The oxford handbook of motivation* (pp. 463–478). New York, NY: Oxford University Press.

Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review*, 12, 265–310. doi: 10.1016/0273-2297(92)90011

Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology, 25*, 68–81. doi: 10.1006/ceps.1999.1015

Winne, P.H., & Perry, N.E. (2000). Measuring self-regulated learning. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 531–566). San Diego, CA: Elsevier Academic Press.

Wolfgang, M., & Dowling, W. (1981). Differences in motivation of adult and younger undergraduates. *Journal of Higher Education, 52*(6), 640–648.

Wolters, C.A. (1998). Self-regulated Learning and college students' regulation of motivation. *Journal of Educational Psychology*, 90(2), 224-235. doi: 10.1037/0022-0663.90.2.224.

Yakar, Z, Can, B., & Besler, H., (2013). Does the teaching program effect on pre-service teachers' self-regulation?. *International Journal of Academic Research.* 5(3), 93-101.

Young, M. H., Miller, B. C., Norton, M. C., & Hill, E. J. (1995). The effects of parental supportive behaviors on life satisfaction of adolescent offspring. *Journal of Marriage and Family*, *57*, 813–822.

Zemke, R. & Zemke,S. (1988). Thirty things we know for sure about adult learning. *Training.* 57-61.

Zhang , J. (2007). *Is debt bad for students? The effects of student debt on course selection, motivation, happiness, and academic performance.* (Unpublished master's thesis, University of Canterbury.) Retrieved from http://ir.canterbury.ac.nz/bitstream/10092/1468/1/thesis_fulltext.pdf?origin=publication_detail

Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. Zimmerman & D. Schunk (Eds.), *Self- regulated learning and academic achievemen*t (2nd ed.; pp. 1–37). Mahwah, NJ: Lawrence Erlbaum Associates.

APPENDIX 1

MSLQ Questions

Intrinsic Goal Orientation

1. In class, I prefer course material that really challenges me so I can learn new things.

16. In class, I prefer course material that arouses my curiosity, even if it is difficult to learn.

22. The most satisfying thing for me a course is trying to understand the content as thoroughly as possible.

24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.

Extrinsic Goal Orientation

7. Getting a good grade in a class is the most satisfying thing for me right now.

11. The most important thing for me right now is improving my overall grade point average, so my main concern this semester is getting good grades.

13. If I can, I want to get better grades this semester than most of the other students.

30. I want to do well this semester because it is important to show my ability to my family, friends, employer, or others.

Task Value

4. I think I will be able to use what I learn in this course in other courses.

10. It is important for me to learn the course material in this class.

17. I am very interested in the content area of this course.

23. I think that course material in this class is useful for me to learn.

26. I like the subject matter of this course is very important to me.

Rehearsal

39. When I study for this class, I practice saying the material to myself over and over.

46. When studying for this course, I read my notes and the course readings over and over.

59. I memorize keywords to remind me of important concepts in this class.

72. I make list of important terms for this course and memorize the list.

Elaboration

53. When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions.

62. I try to relate ideas in this subject to those in to other courses whenever possible.

64. When reading for this class, I try to relate the material to what I already know.

67. When I study for this course, I write brief summaries of the main ideas from the readings and the concepts for the lectures.

69. I try to understand the material in the class by making connections between the readings and the concepts for the lectures.

81. I try to apply ideas from course readings in other class activities such as lectures and discussion.

Organization

32. When I study the readings for this course, I outline the material to help me organize my thoughts.

42. When I study for this course, I go through the readings and my class notes and try to find the most important ideas.

49. I make simple charts, diagrams, or tables to help me organize course material.

63. When I study for this course, I go over my class notes and make an outline of important concept.

Critical Thinking

38. I often find myself questioning things I hear or read in this course to decide if I find them convincing.

47. When a theory, interpretation, or conclusion is presented in class or in the readings, try to decide if there is good supporting evidence.

51. I treat the course material as a starting point and try to develop my own ideas about it.

66. I try to play around with ideas of my own related to what I am learning in this course.

71. Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives.

Metacognitive Self-Regulation

33. During class time I often miss important point because I'm thinking of other things

36. When reading for this course, I make up questions to help focus my reading.

41. When I become confused about something I'm reading for this class, I go back and try to figure it out.

44. If course materials are difficult to understand, I change the way I read material.

54. Before I study new course material thoroughly, I often skim it to see how it is organized.

55. I ask myself questions to make sure I understand the material I have been studying for this class.

57. I often find that I have been reading for class but don't know what it was all about.

61. I try to think through a topic and decide what I am supposed to learn from it rather that just readings it over when studying.

76. When studying for this course I try to determine which concepts I don't understand well.

78. When I study for this class, I set goals for myself in order to direct my activities I each study period.

79. If I get confused taking notes in class, I make sure I sort it out afterwards.

(MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991)

APPENDIX 2

SURVEY

Q5 You are invited to participate in a research study to help assess the effects of student financial contribution toward post-secondary educational experience on student motivation, cognitive strategies, and metacognitive strategies among students enrolled in the College of Education at Auburn University. The study is being conducted by Eva Marie Kane, under the direction of Dr. Jill Salisbury-Glennon, Ph.D., Professor in the Auburn University Department of Educational Foundations, Leadership, and Technology. You were selected as a possible participant because of your enrollment at Auburn University in the College of Education and because you are over the age of nineteen. If you decide to participate in this research study, you will be asked to answer questions that pertain to the effect that student financial contribution toward post-secondary educational experience has had on your college academic career. Your time commitment will be about 20 minutes. All survey responses will be anonymous. If you choose to participate a $1 donation will be made to the St Vincent De Paul food bank located in Auburn, AL. This contribution will be made up to $200.Your privacy will be protected. Any information obtained in connection with this study will be confidential. Information obtained through your participation may be used in published articles to scholarly journals, a dissertation, and/or professional academic session.

If you have any questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by Phone (334)- 844-5966 or e-mail at hsubject@auburn.edu or IRBChair@auburn.edu.The Auburn University Institutional Review Board has approved this document for use from 5/1/14 to 4/30/17. Protocol # 14-180 EX 1405

Having read the information provided, you must decide whether or not you wish to participate in this research study. Your signature indicates your willingness to participate.

- ❍ Yes, I give my consent (1)
- ❍ No, I do not give my consent (2)

If No, I do not give my consent Is Selected, Then Skip To End of Survey

Q27 Are you 19 years old or older?

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To End of Survey

Q11 Estimate how much money your parents make, collectively?

- ❍ 0- $8,925 (1)
- ❍ $8,926- $36,250 (2)
- ❍ $36,251- $87,850 (3)
- ❍ $87,851- $183,250 (4)
- ❍ $183,251-$398,350 (5)
- ❍ $398, 351 + (6)

Q6 List the percentages that each of the following contributed to your tuition. This must total 100%

_____ Parents/family (1)
_____ Loans (2)
_____ Scholarships (3)
_____ Personal Savings (4)
_____ Full or part-time summer job (5)
_____ Full or part-time job during the school year (6)

Q26 How many semesters have you been in college?

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)
- ❍ 8 (8)
- ❍ 9 (9)
- ❍ 10 (10)
- ❍ 11 (11)
- ❍ 12 (12)
- ❍ 13 (13)
- ❍ 14+ (14)

Q7 How many semesters until you graduate?

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)
- ❍ 8 (8)
- ❍ 9 (9)
- ❍ 10 (10)
- ❍ 11 (11)
- ❍ 12 (12)
- ❍ 13 (13)

Q12 What is your current cumulative GPA?

- ❍ 0-1.0 (1)
- ❍ 1.1-2.0 (2)
- ❍ 2.1-2.5 (3)
- ❍ 2.6- 3.0 (4)
- ❍ 3.1-3.5 (5)
- ❍ 3.6-4.0 (6)

Q8 How many classes, on average, do you take per semester?

- ❍ 1-2 (1)
- ❍ 3-4 (2)
- ❍ 5-6 (3)
- ❍ 7-8 (4)

Q10 What is the most classes you have taken in a semester?

- ❍ 1-2 (1)
- ❍ 3-4 (2)
- ❍ 5-6 (3)
- ❍ 7-8 (4)

Q1 Answer the following statements based on your preferences with 1 being not true and 7 being very true

In class, I prefer course material that really challenges me, so I can learn new things (1)	❍	❍	❍	❍	❍	❍	❍
In class, I prefer course material that arouses my curiosity, even if it is difficult to learn (2)	❍	❍	❍	❍	❍	❍	❍
The most satisfying thing for me in a course is trying to understand the content as thoroughly as possible. (3)	❍	❍	❍	❍	❍	❍	❍
When I have the opportunity, I choose course assignments that I can learn from even if they don't guarantee a good grade (4)	❍	❍	❍	❍	❍	❍	❍
Getting a good grade in a class is the most satisfying thing for me right now. (5)	❍	❍	❍	❍	❍	❍	❍
The most important thing for me right now is improving my overall grade point average, so my main concern this semester is getting good grades. (6)	❍	❍	❍	❍	❍	❍	❍
If I can, I want to get better grades this semester than most of the other students (7)	❍	❍	❍	❍	❍	❍	❍
I want to do well this semester because it is important to show my ability to my family, friends, employer, or others. (8)	❍	❍	❍	❍	❍	❍	❍

I think I will be able to use what I learn in the course in other courses. (18)	❍	❍	❍	❍	❍	❍	❍
It is important for me to learn the course material in my program. (13)	❍	❍	❍	❍	❍	❍	❍
I am very interested in the content areas of my program. (12)	❍	❍	❍	❍	❍	❍	❍
I think the course material in my program is useful for me to learn. (11)	❍	❍	❍	❍	❍	❍	❍
I like the subject matter of my program. (10)	❍	❍	❍	❍	❍	❍	❍
Understanding the subject matter of my program is very important to me. (9)	❍	❍	❍	❍	❍	❍	❍

Q29 Answer the following statements based on your preferences with 1 being not true and 7 being very true

When I study for a class, I practice saying the material to myself over and over. (1)	❍	❍	❍	❍	❍	❍	❍
When studying for a class, I read my class notes and the course readings over and over again. (2)	❍	❍	❍	❍	❍	❍	❍
I memorize keywords to remind me of important concepts in a class. (3)	❍	❍	❍	❍	❍	❍	❍
I make lists of important terms for a course and memorize the list. (4)	❍	❍	❍	❍	❍	❍	❍
When I study for a class, I pull together information from different sources, such as lectures, readings, and discussions. (5)	❍	❍	❍	❍	❍	❍	❍
I try to relate ideas in this subject to those in other courses whenever possible. (6)	❍	❍	❍	❍	❍	❍	❍
When reading for a class, I try to relate the material to what I already know. (7)	❍	❍	❍	❍	❍	❍	❍
When I study for a course, I write brief summaries of the main ideas from the reading and the concepts for the lectures. (8)	❍	❍	❍	❍	❍	❍	❍
I try to understand the material in a class by making connections between the readings and the concepts from the lectures. (9)	❍	❍	❍	❍	❍	❍	❍

I try to apply ideas from course readings in other class activities such as lecture and discussion. (10)	❍	❍	❍	❍	❍	❍	❍
When I study the readings for a course, I outline the material to help me organize my thoughts. (11)	❍	❍	❍	❍	❍	❍	❍
When I study for a course, I go through the readings and my class notes and try to find the most important ideas. (12)	❍	❍	❍	❍	❍	❍	❍
I make simple charts, diagrams, or tables to help me organize course material. (13)	❍	❍	❍	❍	❍	❍	❍
When I study for a course, I go over my class notes and make an outline of important concepts. (14)	❍	❍	❍	❍	❍	❍	❍
I often find myself questioning things I hear or read in a course to decide if I find them convincing. (15)	❍	❍	❍	❍	❍	❍	❍
When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence. (16)	❍	❍	❍	❍	❍	❍	❍
I treat course material as a starting point and try to develop my own ideas about it. (17)	❍	❍	❍	❍	❍	❍	❍
I try to play around with ideas of my own related to what I am learning in this program (18)	❍	❍	❍	❍	❍	❍	❍

Whenever I read or hear an assertion or conclusion in a class, I think about possible alternatives. (19)	❍	❍	❍	❍	❍	❍	❍

Q28 Answer the following statements based on your preferences with 1 being not true and 7 being very true

During class time I often miss important points because I'm thinking of other things. (1)	❍	❍	❍	❍	❍	❍	❍
When reading for a course, I make up questions to help focus me reading. (2)	❍	❍	❍	❍	❍	❍	❍
When I become confused about some-thing I'm reading for a class, I go back and try to figure it out. (3)	❍	❍	❍	❍	❍	❍	❍
If course materials are difficult to understand, I change the way I read material. (4)	❍	❍	❍	❍	❍	❍	❍
Before I study new course material thoroughly, I often skim it to see how it is organized. (5)	❍	❍	❍	❍	❍	❍	❍
I ask myself questions to make sure I under-stand the material I have been studying. (6)	❍	❍	❍	❍	❍	❍	❍
I try to change the way I study in order to fit the course requirements and the instructor's teaching style. (7)	❍	❍	❍	❍	❍	❍	❍
I often find that I have been reading for a class but don't know what it was all about. (8)	❍	❍	❍	❍	❍	❍	❍
I try to think through a topic and decide what I am supposed to learn from it rather that just reading it over when studying. (9)	❍	❍	❍	❍	❍	❍	❍

When studying for a course I try to determine which concepts I don't understand well. (10)	❍	❍	❍	❍	❍	❍	❍
When studying for a course, I set goals for myself in order to direct my activities in each study period. (11)	❍	❍	❍	❍	❍	❍	❍
If I get confused taking notes in class, I make sure I sort it out afterwards. (12)	❍	❍	❍	❍	❍	❍	❍