ABSTRACT

EFFECTS OF A LEARNING STRATEGIES COURSE ON ACADEMICALLY AT-RISK COLLEGE STUDENTS’ LEVELS OF SELF-EFFICACY AND ACHIEVEMENT MOTIVATION

by Nicholas Wayne DeHoff

This study examined the impact of a college level learning strategies course on academically at-risk students’ levels of self-efficacy and achievement motivation. These variables were measured using three self-report measures. Results were analyzed via t-tests to determine whether the participants experienced an increase in self-efficacy and achievement motivation at the conclusion of the course. It was found that the participants experienced statistically significant increases in levels of self-efficacy and in one of three measurements of achievement motivation. In addition, the GPAs of students enrolled in the course were examined for changes from the beginning of the course to the end and were found to have increased. Limitations of the study and potential directions for future research are discussed.
EFFECTS OF A LEARNING STRATEGIES COURSE ON ACADEMICALLY AT-RISK COLLEGE STUDENTS’ LEVELS OF SELF-EFFICACY AND ACHIEVEMENT MOTIVATION

Thesis

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Effects of a Learning Strategies Intervention on Academically At-Risk College Students’ Levels of Self-Efficacy and Achievement Motivation

Introduction

Students of all ages and from many grades will require academic assistance at some point in their education. This population includes college students. College is a period in which many young adults discover who they are as a person, a professional, and a student. It may be assumed that because a student has decided to pursue a college education, they are a “good” student and will not struggle in higher education; this is not always the case. Some students may discover once they begin their college education that they need to learn how to study more effectively and efficiently than they did in high school, because college courses can be considerably more demanding.

Colleges are now directing more attention to providing academic assistance to college students, assisting these students in obtaining, redirecting, or maintaining their academic skills. This increase in interest has been influenced by the expanding emphasis on obtaining a college education in the United States. Many high paying and highly valued jobs require a college education, so it is vital that students not only complete, but excel at their education during their collegiate careers. The difficulty of college courses, at times, proves to be too much for many students. There is a need for interventions and strategies that can be implemented to assist the struggling college student. Much of the research in this area is dated and the efforts need to be expanded to assist all collegiate students who need them.

Purpose of the Study

The purpose of this study was to examine the impact of a learning strategies course implemented for college-aged students who are academically at-risk on their levels of self-efficacy related to academics as well as their levels of achievement motivation. If the findings of this study indicate that the course being implemented has a positive impact on the students’ levels of perceived self-efficacy and achievement motivation, then the intervention can be replicated at other institutions. The goal of this study was to examine and analyze an intervention that can enable students at the collegiate level to experience increases in their levels of self-efficacy and achievement motivation to a point that it generalizes into their academic performance. Data were gathered using self-report surveys.

Definition of Terms

For the purposes of this study, the following terms are defined as followed:

1. *Academically at-risk*—students enrolled in the study who have obtained a cumulative grade point average (GPA) of a 2.0 or lower, out of a 4.0 scale, in all previous semesters.

2. *Learning strategies course*—the course that is being offered through Miami University; students are taught by a learning specialist in this course that meets for an hour twice a week. In this course the students learn how to develop effective learning strategies, study habits, test taking strategies, and how to use a planner. In addition, the students are exposed to campus resources that will enable them to perform at the highest level during their collegiate career.

3. *Self-efficacy*—the belief that one can perform novel or difficult tasks, or develop the necessary coping skills to deal with adversity (Bandura, 1994).
4. *Achievement motivation*-the need for success or the attainment of excellence (Rabideau, 2005).

**Research Hypotheses**

This study focused on two research hypotheses that guided the direction and flow of the study:

1. Academically at-risk students enrolled in a learning strategies course at a large, public university will exhibit an increase in their levels of perceived self-efficacy over the course of the semester.
2. Academically at-risk students enrolled in a learning strategies course at a large, public university will exhibit an increase in their levels of achievement motivation over the course of the semester.

**Literature Review**

It is necessary to discuss the approaches previously utilized to assist students who are struggling academically at the collegiate level. The literature on this topic includes multiple approaches that have been implemented at different institutions. Most have resulted in some degree of success in enabling students to perform more effectively, whether in academics or in their personal lives. The literature reviewed in this section has been divided into broad categories that encompass the main strategy being utilized to implement the necessary interventions. A final section has been added in order to address self-efficacy within college students and its importance in their academic endeavors. This study aims to incorporate various facets from prior research into a comprehensive approach that will assist students to the highest degree possible.

**Academic Advising**

Universities in the United States are implementing academic advising policies for students in order to maintain and increase academic achievement. This is particularly true for first year students due to their additional struggle of transitioning from high school to college as well as adjusting to demanding collegiate level courses. Chiteng Kot (2014) conducted research on this phenomenon. Two groups of students were followed throughout their first year of college: one group participated in centralized academic advising and the other group did not participate in any academic advising. The study examined how advising could be put into place in a large university setting in order to support students in their academic endeavors. The researcher found that at the end of the freshmen’s first academic year, the experimental group experienced increases in cumulative GPA, and increases in their first semester and second semester GPAs. The experimental group also experienced a decrease in their probability of first-year attrition. The control group experienced a stagnant or decreased GPA during the same period. This type of academic intervention had beneficial outcomes for the students and appeared to enable them to achieve the academic goals they set. It is probable that students who are academically at-risk would potentially benefit from the services of centralized academic advising as well.

Heisserer and Parette (2002) conducted a meta-analysis of academic advising research to formulate an idea about what aspects of advising are successful for at-risk students in university settings. To summarize the various advising methods used throughout the study to assist at-risk students, the researchers created the term “intrusive” advising. Throughout their review, Heisserer and Parette defined at-risk students as those who were ethnic minorities, academically disadvantaged, had disabilities, or were of low socioeconomic status. The students who qualified
for one or more of these characteristics were identified and referred for intrusive advising. The results of this comprehensive review by Heisserer and his colleagues showed that an integrated advising approach was the most beneficial in working with at-risk students and that this population is heavily impacted by the way they are treated by the institution. Integrated advising is a comprehensive approach that not only emphasizes necessary information to succeed in college, but also includes a significant counseling role. If these students feel as though the institution truly has their best interests in mind, they are more willing to participate in the advising programs made available to them. This article also includes models for effective intrusive advising that professionals should use to train their professional staff members. Advising can be implemented in order to assist at-risk students if it is used in the correct manner.

A study conducted by Abrams and Jernigan (1984) examined the impact another form of advising had on over 200 academically at-risk college students. This method of advising consisted of professionals at the university conducting small classes in which the at-risk students participated in activities that focused on teaching better study and reading strategies, provided individualized content specific tutoring, and provided advising in the areas of academics and adjustment to college. The purpose of these advising classes was to equip the students with the necessary tools to succeed in classes at the collegiate level. The researchers found that the students who participated in these advising classes experienced a significant increase in their reading skills and GPAs. By examining the student’s high school GPAs and college admission test scores, they were predicted to fail, but through the application of these advising classes, 57% of the students experienced semester GPAs equivalent to a C or better. It is evident that with academic advising, academically at-risk students can be equipped with necessary coping and study skills that enable them to succeed at the collegiate level.

Mentoring

Some colleges in the United States engage in academic advising programs that consist of professionals sitting down with students and selecting courses that will help them fulfill the requirements necessary to graduate. However, some institutions have had more success with intensive mentoring programs. Mentoring programs differ from advising in their approach. Advising tends to cover the groundwork of what classes to take, discussing degree audits, and completing the requirements for a major. Mentoring is more personal. Mentoring tends to have one professional working with a person who needs their assistance and providing them with first-hand experiences and advice on how to deal with difficult and stressful situations. Mentoring also differs from intrusive and integrated advising in its scope. Whereas these two advising methods focus on improving academic performance, the focus of mentoring is to improve academic performance as well as provide students with an opportunity to advance and mature both professionally and personally. These advances are made by working with professionals who have experience in a particular field and can provide both professional and personal guidance that may lead to improved academic performance as well. Vivian (2005) conducted a study on this alternate academic advising approach. Vivian worked with at-risk students (students with a GPA below a 2.0) by advising them through a method he termed “mentoring.” Not only did Vivian help the students select their courses, he held weekly informal meetings with them to discuss academic matters as well as staying in touch via email to monitor academic and personal well-being. Vivian discovered that the academically at-risk students lacked knowledge about how college classes worked and that this was negatively impacting their academics. During the mentoring sessions, Vivian and the students worked together on how to utilize office hours, generated new study strategies and time management skills, and completed check-ins on
progress in classes. These mentoring sessions resulted in 83% of the students involved in the study increasing their GPAs whereas within the comparison group of the study, only 32% of those students experienced increases in their GPAs. Vivian also discussed how interventions vary from institution to institution to determine the range of variety between multiple mentoring approaches. Vivian’s study provides a more comprehensive model of mentoring, including the mentoring sessions and selection of appropriate courses that are more beneficial to at-risk students.

Smith (2013) also researched mentoring at-risk students in higher education. Smith recommends a three-tier model for mentoring at-risk students in college: advising, advocacy, and apprenticeship. This model of mentoring is a more intensive intervention process that requires each student to have a team of four different mentors: faculty, peer, community member, and family member. The team’s purpose is to establish accountability for each individual student. The academically at-risk student will not go through their collegiate career unsupported. With this team, students have a reliable group of supporters mentoring and advising them through this difficult transitional period. It is evident through the research on advising and mentoring that it is possible to assist academically at-risk students. It may take a combination of many factors including holding the students accountable, giving real-life advice on how to navigate through college, as well as helping them select courses that will enable them to do well in higher education.

An area for which some college students receive mentoring assistance is testing. There is typically a large difference between college tests and high schools tests and this tends to be a source of anxiety for students. Mentors who have gone through this transition can provide excellent services for those who struggle with this phenomenon by providing students with test taking strategies and stress relief tips. Students who experience test anxiety may struggle with academic deficiency and upon being tested, they often worry about the outcome of the test than what they have learned. This leads to unnecessary stress and anxiety while taking the exam, which could lead to poor grades and eventually being labeled as at-risk. Wachelka and Katz (1999) conducted a study in which they mentored college-aged students who had learning disabilities. Many of these students struggled significantly with test anxiety and its management. Not only did they struggle with the issue of a disability, they also have severe levels of stress and anxiety while test taking. Through their mentoring sessions, the examiners were able to teach the participants muscle relaxation techniques, how to properly self-instruct and study for an exam, and appropriate test taking strategies. These skills were taught throughout an eight-week course. After the students had been exposed to this additional education, they showed significant reduction in their levels of test anxiety based on the Test Anxiety Index (TAI) as well as increase in their study skills and academic self-esteem. Mentoring comes in many forms and variations. Some focus on purely academic skills whereas other focus on how to succeed in the college environment. It is apparent through these multiple studies that mentoring at-risk college students has clear advantages and can lead to multiple improvements for the students. It is possible that combining the different forms of mentoring could lead to more efficient and successful learning outcomes for the students.

In a study that focused on first-year, minority undergraduates who come from populations with typically low retention rates, Campbell and Campbell (2007) examined the long-term effects of a mentoring intervention for students. In this program, Campbell and Campbell focused on pairing students with professionals who mentored students on how to handle the stress of and transition into the college setting. The researchers took a further step by
matching the participants, to the best of their ability, with a mentor based on gender or ethnicity. They found no significant differences in GPA when the participants were matched on gender, but there were significant differences when students were matched with a mentor based on ethnicity. The results indicated that students enrolled in the mentoring program exhibited increased GPAs within a semester whereas students not enrolled in the program did not. A long-term impact that the researchers found after 11 years was that the students who participated in the mentoring program were more likely to enroll in a graduate program versus the control group participants. This study provides further evidence of the effectiveness of mentoring and that mentoring programs could go a step further in increasing the benefits of mentoring by matching their participants with whom they can identify and form positive working relationships.

In a study conducted by Swartz, Prevatt, and Proctor (2005), another variation of mentoring, referred to as coaching, was examined in regards to its success when implemented for college students with Attention Deficit/Hyperactivity Disorder (ADHD). The coaching technique helped create structure in the academic lives of the participating students in order to counteract the effects of ADHD on their executive functioning. This coaching technique employed doctoral and EdS level counseling graduate students to provide sessions for 8 weeks. During the sessions the student and the coach worked on various study strategies, monitored academic and social behaviors, developed problem-solving skills to overcome areas of difficulty, and created future plans of action for success in their classes. At the termination of the coaching sessions, Swartz and her colleagues discovered that the participating students showed improvement in the areas of improving time management, organization skills, studying habits, and paying attention in class. The results from this study further corroborate the idea that mentoring strategies implemented at the college level benefitted students with both learning and general academic difficulties.

**Attribution Retraining**

Individual perceptions about their success or failure can have a large impact on collegiate success. Despite having an effective and talented instructor, some students might not be able to learn or be taught effectively. It is possible that these students have innate, conditioned ways of thinking about their own abilities that affects and hinder their learning capabilities. Perry, Hechter, Menec, and Weinberg (1993) did a meta-analysis of strategies already in place at higher education institutions that assist academically at-risk students and found that only a few programs had implemented an attributional retraining program. Kallenbach (2015) defines attributional retraining as a method to change the way students think about their success and failures in an academic area so that their beliefs about themselves will work for, rather than against, any chances they have at success. Perry and his colleagues (1993) discovered that the few programs who utilized this approach have found small, yet significant, success with it. They discovered that successful attributional retraining programs consisted of replacing students’ negative perceptions on their abilities to succeed academically with “internal, more stable attributions, such as good luck, thereby encouraging expectations of continued success” (p. 691).

Attributional retraining is a process that can be implemented to enable students to view their attributions as a contributing factor to their successes. This method can also be applied in the collegiate setting to impact students’ motivation levels so that they may succeed more frequently and consistently in the classroom. Haynes, Daniels, Stupinsky, Perry, and Hladkyj (2008) conducted a study that examined how an attributional retraining program impacted first-year college students’ levels of academic achievement and motivation. What Haynes and her colleagues discovered was that attributional retraining increased the participants’ levels of mastery motivation, but not performance, and it also had a significant relationship with academic
achievement. The research conducted by this team also concluded that mastery motivation is a key component of attributional retraining programs. It is possible that with the combination of these two attributional approaches, collegiate programs can foster the essential mastery motivational component that is impactful in successful college learning.

The research in these studies suggest that it may be beneficial for institutions to implement an attribution retraining intervention as students transition from high school to college. This transition is a time where many students feel vulnerable and inept in their abilities to handle everything that is presented to them. If these interventions are implemented in the early stages of transition, it may serve as an effective way to identify students who will be at-risk as their college career continues as well as enable students to foster effective levels of mastery motivation. Through this identification process, the institution will be able to help students correct negative attributions; if a student believes they have the abilities and intelligence to complete a task or course, their chances of completing it successfully will increase significantly. Attributional retraining is yet another effective tool that institutions can implement in order to help students succeed academically as well as enhance their levels of mastery motivation, but requires more research.

Motivation
Some research suggests that particular students struggle academically in college because they never learned the necessary motivational skills needed to achieve in higher education. Balduf (2009) studied first year college students who succeeded academically in high school and then struggled during their first and second semesters of college in order to determine where the gap in skills was occurring. Through questionnaires and interviews, Balduf determined that a large percentage of students who thrived in high school attributed it to being able to coast through their courses and not having much motivation to learn. These same students experienced a lack of intrinsic motivation during their first two semesters at college, which negatively impacted their academic success. These students, who were able to succeed in high school without being motivated or trying as hard, were trying to succeed in college courses with this same strategy. Balduf recommends that colleges need to implement counseling programs that assist these at-risk students in learning how to motivate themselves when their courses are not going as planned and teaching effective study skills necessary to succeed. This strategy was effective in Balduf’s study because it not only offered information on study skills and time management practices to students, but it also offered the opportunity for students to practice behaviors that will result in intrinsic motivation. This strategy could be used in collegiate academic advising or mentoring to further the chances of a student's’ success in college courses.

Determining what motivates a student to learn and study is essential in assisting students achieve in college. There are many forms of motivation that impact individual students differently. Some students may work hard in college in order to master a specific skill or content area for the sake of learning. This motivation has been found to be most effective for it is intrinsic and encourages students work hard for the sake of learning (Hsieh et al., 2007). Other students may be motivated to work in college to avoid exhibiting a lack of knowledge. This form of motivation is purely extrinsic because the individual is concerned with how other view them. In a study conducted by Hsieh, Sullivan, and Guerra (2007), these different forms of motivation were examined. Hsieh and her colleagues compared two different groups of undergraduate students. The first group were students in good academic standing (above a 2.0 GPA) and the other students were academically at-risk (below a 2.0 GPA). The team compared the two different populations based on whether they were motivated intrinsically or extrinsically. The
results found that students who succeeded academically were motivated to learn for the mastery of content. These students were learning to master a particular skill without concern for external factors. The academically at-risk students also exhibited a pattern in their forms of motivation. These students were typically motivated by the desire to avoid being seen as lacking in knowledge. They were not learning to master an area; they were trying to impress or to avoid looking incompetent in front of their peers or superiors. This provides further evidence that college students should be taught and encouraged to learn content for the purpose of mastering an area. Particular students may be concerned with what their professors think of them if they cannot express what they have learned. It is possible that if students are taught or exposed to appropriate motivating factors, they will have the necessary tools to succeed academically in college.

Eppler and Harju (1997) examined motivation through a study that focused its attention on both traditional and nontraditional college students. The variable that the examiners were studying was the difference between learning goal orientation and achievement goal orientation. These two goal orientations can also be considered motivation styles because the students are either being motivated to learn and work in the course content for the sake of learning (learning goal orientation) or they can be motivated to work in the course to achieve a high grade (achievement goal orientation). The examiners discovered that the students who embraced learning had higher GPAs and success rates throughout college, regardless of whether they were traditional or nontraditional students. The students who embodied the achievement goal orientation received lower grades and GPAs, providing evidence that motivation is a key element to academic and college success. This research corroborates the idea that professionals can incorporate motivational aspects to interventions to increase academic and student success at the college level if these aspects of the intervention focus on valuing learning outcomes versus achievement outcomes.

Self-Efficacy

Self-efficacy differs from the more commonly known concept of self-esteem in the sense that self-efficacy refers to a person’s belief in their ability to succeed in novel or difficult tasks (Bandura, 1994) whereas self-esteem has more to do with how one feels about themselves (Rosenberg, 1965). In line with this understanding, a higher level of self-efficacy should prove beneficial in college academics due to the unlimited number of novel and difficult tasks students are consistently exposed to. In a meta-analysis conducted by Karen Multon, Steven Brown, and Robert Lent (1991), they reviewed the current literature on how self-efficacy is correlated with academic outcomes. They discovered a significant and positive relationship between students’ levels of self-efficacy and academic performance and persistence across, “a wide variety of subjects, experimental designs, and assessment methods” (p. 30). Martin Chemers, Li-tze Hu, and Ben Garcia (2001) conducted a longitudinal study on first year college students to examine what impact self-efficacy and optimism had on academic performance, stress, health, and commitment to school. Through the use of a self-report questionnaire, these researchers conducted a pre- and post-test study in which the participants answered various questions regarding the variables previously mentioned. The researchers discovered that self-efficacy and optimism had a strong relationship with both academic performance and adjustment to college life. In a related study that was focus on self-efficacy and academic performance in science and engineering courses, Robert Lent, Steven Brown, and Kevin Larkin (1984) discovered that 42 undergraduate students who were in a science or engineering based major and had higher self-
reports of self-efficacy experienced higher academic grades and persisted longer in science or engineering based majors than students who had lower levels of self-efficacy.

Self-efficacy can affect more areas in college students than just academic performance and achievement. Laurel Haycock, Patricia McCarthy, and Carol Skay (2011) conducted a study that examined procrastination within college students and self-efficacy as a potential contributing factor. In an interesting finding, Haycock and her colleagues discovered that self-efficacy did in fact have a relationship with levels of procrastination. It was determined that self-efficacy strength was an inverse predictor of levels of procrastination. In other words, the higher a student’s level of self-efficacy was, the lower their chances of procrastination were. This study was rare in the sense that most studies done on self-efficacy are looking at their relation with academic achievement. Although causal conclusions cannot be definitively drawn, this particular study suggests that fostering higher levels of self-efficacy within students may contribute to higher levels of academic success.

Donna Coffman and Tammy Gilligan (2002) conducted a study that examined how social support, self-efficacy, and stress not only impacted first-year college students’ academic success, but also the role it played in adjustment to college life. Coffman and Gilligan discovered that the students who reported higher levels of both self-efficacy and social support were also experiencing increased levels of life satisfaction than those who reported lower levels of both variables. It is a possible conclusion that the amount of self-efficacy one has is related to how much social support a person is experiencing at the time. Universities may find these conclusions impactful in their preventative plans to increase retention rates. Assisting first-year students in their adjustment to college may improve retention for students. The results found in Coffman and Gilligan’s study were also used to discuss potential preventative measures that could be taken to increase students’ levels of social support and self-efficacy. Preventative measures should be utilized whenever possible in order to not only increase retention, but to also assist students in achieving higher levels of life satisfaction and in turn improving academic performance.

Throughout this literature review it is evident that there have been effective interventions implemented for college students who are academically at-risk. Some of the interventions include variations of academic advising, mentoring, attributional retraining, and enhancing internal motivation in students. These interventions, if implemented early on in a student’s higher education career, can help them overcome innate or learned academic weaknesses and excel in college. The interventions mentioned in this review are a brief overview of some available interventions for collegiate students, but they are representative of the most effective interventions available. However, much of the influential research is a bit dated. A recommendation for future research is to combine some of these interventions into a comprehensive approach to measure the overall efficiency they have on students who are struggling academically.

It was also made evident through this literature review that there has been a significant, positive relationship found between levels of self-efficacy and academic achievement and performance. This literature review has revealed many different interventions available to current researchers and has enabled me to want to examine an intervention to be implemented on struggling college students and track their progress through college. The goal of this study is to examine the learning strategies course informed by the theoretical approaches discussed above and determine if the applied approaches will have positive impacts on the enrolled students’ levels of self-efficacy and achievement motivation. The hypotheses of this study are that academically at-risk students enrolled in a learning strategies course at a mid-sized, public
university will: (a) exhibit an increase in their levels of self-efficacy, (b) exhibit an increase in their levels of achievement motivation, and (c) exhibit an increase in their level of GPA.

Research Design

Participants

Study participants were college-aged students ranging from ages 18-22 who had voluntarily enrolled in a mid-sized, public university’s learning strategies course that is provided through one of the university’s learning centers. Of the 32 students who were enrolled in all three sections of the course, 29 students provided either pretest or posttest data. The final number of participants who provided data at both the pretest and posttest collection points was 17. The following reported demographics include only the 17 participants who completed both the pretest and the post-test. Fifty-nine percent (n=10) of the participants were male and forty-one percent (n=7) of the participants were female. Ninety-four percent (n=16) of the participants were not first generation students and six percent (n=1) were first generation students. Seventy-one percent (n=12) of the participants identified themselves as Caucasian-Non Hispanic, twelve percent (n=2) identified themselves as Black, six percent (n=1) of the participants identified as Native American, six percent (n=1) identified themselves as Asian/Pacific Islander, and six percent (n=1) identified themselves as Other. A summary of the reported demographic data can be seen in Table 1 below.

Table 1
Summary of Participant’s Reported Demographic Data

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>First Generation Students</th>
<th>Not First Generation Students</th>
<th>Caucasian-Non Hispanic</th>
<th>Black</th>
<th>Native American</th>
<th>Asian/Pacific Islander</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>59%</td>
<td>41%</td>
<td>6%</td>
<td>94%</td>
<td>71%</td>
<td>12%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Notes. N=17

Materials

The Contextual Achievement Motivation Survey (CAMS; Smith, 2015) was administered to assess achievement motivation. At two points throughout the semester, beginning and end, the students completed a survey containing items from the CAMS to examine if any change in these levels occurred as a result from the course. This survey contained questions regarding achievement motivation across settings (e.g., school and home). The CAMS utilized two separate scales. For the purposes of this study they were titled Achievement Motivation and Schoolwork Motivation and they contained twenty-two and eight items respectively. There are more than twenty-two items on the original CAMS. After the thesis proposal defense, the committee decided that some of the items used were not appropriate for use in this study. The thesis committee chair and primary investigator conducted an item-by-item analysis and included in this study only those items that directly pertained to achievement motivation within the school setting. The items on both of the scales were responded to by selecting predetermined responses based on a Likert scale. The categories of response were as follows: N=Never, S=Sometimes, 50%=50% of the time, U=Usually, A=Always.

Another construct that was measured during the learning strategies course was self-efficacy. The point of measuring this construct was to determine what their self-efficacy levels are regarding school, course-work, and academic skills before taking the class as well as after.
The measure was administered at the beginning and the end of the semester to gather data on whether there was an increase, decrease, or no change in the levels of self-efficacy regarding academic skills. The tool used to measure self-efficacy is called the General Self-Efficacy Scale (GSE). This scale was developed by Matthias Jerusalem and Ralf Schwarzer (1995) in order to assess a general sense of perceived self-efficacy. It is used to determine how confident people feel in their coping skills and how well they can adapt to new situations. The GSE uses 10 items that the participants responded to by selecting predetermined responses. The response options were: 1=Not true at all, 2=Hardly true, 3=Moderately true, and 4=Exactly true. The GSE can be used with the general adult population with no participants being under the age of 12. Scholz, Dona, Sud, and Schwarzer (2002) found that in regards to reliability, it was normed in 23 countries with Cronbach’s alphas ranging from .76 to .90 with the majority of the measures in the mid .80s. The GSE has high ratings of criterion validity and there are also positive correlations between self-efficacy and favorable emotions, optimism and satisfaction with work (Scholz et al, 2002).

Thirteen items were also added from the Motivated Strategies for Learning Questionnaire (MSLQ) created by Paul Pintrich and Elisabeth De Groot (1990) to further examine and analyze achievement motivation. The full scale is comprised of 44 items that can be responded to by selecting one of seven options. The answers are placed on a Likert scale from 1 to 7 and the options include 1=Not true at all to 7=very true of me. The full scale of items can be broken down into the following 5 subscales; Self-efficacy, Intrinsic Value, Test Anxiety, Cognitive Strategy Use, and Self-Regulation. Paul Pintrich, David Smith, Teresa Garcia, and Wilbert McKeachie (1993) examined the scale’s psychometrics by conducting a study in which they used the MSLQ with 380 college-aged students. They found the internal reliability coefficients for the subscales to range from .62 to .93. Pintrich et al. also analyzed the predictive validity of the subscales and found that the subscales did correlate significantly with the participants’ final course grades for the semester. The instrument sample included 173 participants from a small school district in southeastern Michigan. There are more than thirteen items on the original MSLQ. After the thesis proposal defense, the committee decided that some of the items used were not appropriate for use in this experiment. The thesis committee chair and primary investigator conducted an item-by-item analysis and included in this study only the items that directly pertained to achievement motivation within the school setting.

At the conclusion of the experiment, data regarding the participants’ GPAs was gathered. The learning center provided the primary investigator with the following data: cumulative GPA at the beginning and the end of the semester, and term GPA at the beginning and the end of the semester. The learning center had coded the participants’ identifying information and they were organized into the appropriate sections. For the purposes of this study, only cumulative GPA data were used, because some participants were coming back from probation and as a result they did not have any term GPA data that was usable for the study. At the conclusion of the semester the primary investigator compared the mean cumulative GPA for the participants at the beginning of the course and the mean cumulative GPA for the participants at the conclusion of the course.

Procedures
The study took place over a fifteen-week semester at a mid-sized, public university. The students enrolled in the learning strategies course attended class with an assigned learning specialist serving as instructor. During the third meeting the participants were presented with a consent form detailing the study and giving them the choice to opt out of the study if they so
choose. The initial data collection was postponed from the first meeting until the third in order to
gather as many participants as possible; students were still joining the course during the first
week of classes. To begin the study, participating students completed the survey that included
items from the GSE, CAMS, and MSLQ as well as three demographic items. The instrument was
administered on paper by the primary investigator. After initial instructions had been given, both
the primary investigator and the assigned learning specialist left the room as the participants
completed the instrument. After the final participant completed the survey, the primary
investigator re-entered the room and collected all copies of the instrument. This occurred
during both the pre-test administration and the post-test administration. The three demographic
items consisted of: one item regarding educational status in the participants’ families, one item
regarding the participants’ racial/ethnic identities, and one item regarding their genders. If any
students felt uncomfortable participating in the study, they had the option of not taking part and
could choose to briefly step out of the classroom if desired or work quietly while the students
finished the survey. Filling out the entire survey took approximately 15 minutes per student. The
initial collection of data served as baseline information.

The class took place twice a week and each session lasted one hour. The students and the
assigned learning specialists covered a variety of topics in their classes in order to build
academic skills that could be generalized to their other courses. The subjects covered in the
course included effectively using a planner, maximizing use of time, stress management
techniques, time management skills, test taking strategies, developing an understanding for the
collegiate education system, and long-term goal setting among others. The aim of the course
curriculum was to increase the students’ levels of academic performance so that they can succeed
in the academic field and ultimately increase their GPAs. There were four total sections of the
course offered and three of them had students participate in the study. By request of the learning
center of the university, the primary investigator did not gather data on the class he personally
taught.

At the conclusion of the semester, the participants again completed the comprehensive
survey. There was a decrease from the total number of students who completed the pretest and
the number of students who also completed the posttest measures. The goal of the repeated
measures in this study was to determine whether the students involved in the learning strategies
course experienced any change in their levels of perceived self-efficacy and achievement
motivation over the course of the semester.

Protection of Human Rights

Several steps were taken in an effort to protect the identity and human rights of the
participants. Initially, upon entering the learning strategies course, the participants had an
opportunity to learn about the study taking place and had the option to not participate in the
study. If the participants chose to engage in the study, a consent form was distributed that
outlined in full detail the purpose of the study, the data that was to be collected and analyzed, and
how their confidentiality would be maintained throughout the course of the study and the
development of the written report. It was explained in the consent form that if the participants
wished to withdraw themselves from the study at any point in time for any reason, they may do
so. It was clearly stated that withdrawal from the study would result in no adverse impact on
their grade in the learning strategies course. It was the right of the participants to unenroll from
the study at any point in time for any reason with no objection or questioning from the primary
investigator. Within this section of the consent form it was also stated that upon voluntary
withdrawal from the study, the researcher will dispose and destroy any baseline data that was gathered from that particular participant.

Throughout the report writing process, the levels of self-efficacy, achievement motivation and any demographic information were not attached to any identifying information. Once the participants had agreed to take part in the study, they created a unique identifier comprised of the last two letters of the state they were born in, the first two numbers of their birth month, and the last two numbers of their cell phone number that only the researcher has access to. The purpose of this unique identifier was to create data that could be sorted, matched, and compared to its initial set of data at the end of the semester for analysis purposes while eliminating any chances of identifying information being released. Any data collected on a particular participant were entered for the purposes of the study and reported under the code number. The exemption proposal for the study was submitted to the Miami University Institutional Review Board and was approved for exemption on July 30, 2015.

Analysis

The three instruments contained four total subscales that were examined. Each subscale from the separate instruments was analyzed using SPSS. The four subscales had their reliability measured in SPSS using Cronbach’s Alpha. Normality of each subscale was analyzed using the Shapiro-Wilk statistic and of the four, only one (the GSE) did not meet the criteria to use a parametric statistic; therefore, it used a non-parametric Wilcoxon Signed Rank Test. The other three met the standards required of analyzing using a t-test. The purpose of using the appropriate t-tests in this study was to determine whether a significant change occurred in the students’ levels of self-efficacy and achievement motivation due to the information they gained through the learning strategies course. Each item within the subscales was analyzed using the appropriate t-tests as well as the sum of the total scores for each subscale. Through this, one can determine how much change occurred for each separate item and subscale as well.

Results

Reliability statistics were analyzed to determine the agreeableness of the items within the separate subscales. The following results reflect the reliability of the subscales. The self-efficacy scale consisted of 10 items ($\alpha=.90$), the achievement motivation portion from the CAMS consisted of 22 items ($\alpha=.89$), the schoolwork motivation portion from the CAMS consisted of 8 items ($\alpha=.81$), and the achievement motivation subscale from the MSLQ consisted of 13 items ($\alpha=.82$). These results indicate that all of the scales and their separate items have internal consistencies ranging from good to excellent.

Self-efficacy was measured using the GSE. The 10 items on the GSE were combined into a pretest sum scale score and a post-test sum scale score, and these two scores were used to evaluate the difference between self-efficacy scores as a whole at the beginning of the course ($M=31.14$) and after the course ($M=33.2$). A Wilcoxon Signed Rank Test indicated that the difference was significant, $T=2.073$, $p=.038$, indicating that ratings of self-efficacy were higher at the conclusion of the course than at the beginning. Please refer to Table 2 for the results regarding changes in pre and post data measured by the three instruments and GPA data.
Table 2

Results from t-tests for the Four Individual Subtests and GPA.

<table>
<thead>
<tr>
<th></th>
<th>PRETEST</th>
<th></th>
<th>POSTEST</th>
<th></th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSE</td>
<td>31.1</td>
<td>33.20</td>
<td>2.07*</td>
<td>.038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAMS (22 items)</td>
<td>75.5</td>
<td>12.2</td>
<td>83.9</td>
<td>10.2</td>
<td>2.84*</td>
<td>.012</td>
</tr>
<tr>
<td>CAMS (8 items)</td>
<td>29.1</td>
<td>3.9</td>
<td>31.2</td>
<td>4.3</td>
<td>2.03</td>
<td>.058</td>
</tr>
<tr>
<td>MSLQ</td>
<td>65.2</td>
<td>9.9</td>
<td>63.9</td>
<td>11.7</td>
<td>-.436</td>
<td>.669</td>
</tr>
<tr>
<td>GPA</td>
<td>1.76</td>
<td>.42</td>
<td>2.06</td>
<td>.43</td>
<td>5.26*</td>
<td>.000</td>
</tr>
</tbody>
</table>

Notes. *p<.05, N=17

Achievement motivation was measured using the CAMS and was comprised of two subscales. For the purposes of this study, the two subscales were titled Achievement Motivation and Schoolwork Motivation. The 22 items and 8 items on the CAMS were separately combined into a pretest sum scale score and a post-test sum scale score, and these two scores were used to evaluate the difference between self-efficacy scores as a whole at the beginning of the course. A paired samples t-test was conducted to compare the participants’ levels of achievement motivation and schoolwork motivation at the beginning of the course and at the end of the course. There was a significant difference between the participants’ achievement motivation pretest sum scores ($M=75.7$, $SD=12.2$) and their posttest sum scores ($M=83.9$, $SD=10.2$) at the conclusion of the course; $t(2.84)$, $p=.012$. One participant’s scores were withheld from the final analysis due to them not filling out one or more of the responses in the posttest. There was not a significant difference between the participants’ schoolwork motivation pretest sum scores ($M=29.11$, $SD=3.9$) and their posttest sum scores ($M=31.23$, $SD=4.3$) at the conclusion of the course; $t(2.03)$, $p=.058$.

As mentioned in the methods section certain items were selected from the MSLQ in order to provide further information on achievement motivation. The 13 items on the MSLQ were combined into a pretest sum scale score and a post-test sum scale score, and these two scores were used to evaluate the difference between self-efficacy scores as a whole at the beginning of the course. A paired samples t-test was conducted to compare the participants’ levels of academic motivation at the beginning of the course and at the end of the course. There was not a significant difference between the participants’ academic motivation pretest sum scores ($M=65.2$, $SD=9.9$) and their posttest sum scores ($M=63.9$, $SD=11.7$) at the conclusion of the course; $t(-.436)$, $p=.669$. One participant’s scores were withheld from the final analysis due to them not filling out one or more of the responses in the pretest.

Information regarding GPA was shared from the learning center to provide a picture of how students enrolled in the course did academically as measured by cumulative GPA. As stated previously, there were seventeen participants who provided both pre and posttest data that was used when analyzing the results. However, for the purposes of this study, the GPA data that were provided were drawn from thirty-two students enrolled in the three sections of the learning strategies course. These data are collected every semester by the learning center and was not conducted by the primary investigator or done for purposes of this report. When the course began in August, the thirty-two students enrolled had an average cumulative GPA of 1.76. As stated previously, the aim of this course is to provide students with the study skills, organization strategies, time management techniques, and other tools to succeed within the classroom and in
college life in general. One way this success can be measured is by examining GPA. The thirty-two students had an average GPA of 2.06 at the conclusion of the learning strategies course. Results of a paired-sample t-test indicated the participants experienced significant gains from pre-test ($M=1.76$, $SD=.42$) to post-test GPA ($M=2.06$, $SD=4.33$); $t(5.26)$, $p=.000$.

Discussion

Following the predictions stated in the hypotheses, the results indicated that self-efficacy and one measure of achievement motivation experienced statistically significant increases between the pretest and posttest measures. However, in contrast to the hypotheses, significant increases were not found in an additional measure of achievement motivation. It is not possible to control all variables taking place in each participant’s life, but the learning strategies course was the one constant that each participant was involved in. Therefore, it can be considered that, at least partially, the learning strategies course may have contributed to an improvement in levels of self-efficacy as well as achievement motivation through its instruction of study strategies, time management, organizational skills, and critical reading strategies. The aim of the learning strategies course was to equip college students with the necessary strategies and tools to succeed in collegiate level courses.

Self-efficacy is a construct that can assist students with the necessary outlooks to perform well in college. Higher levels of self-efficacy have been found to be correlated with improved academic performance within the classroom (Chemers, et al., 2001; Multon et al., 1991; Lent et al., 1984). The findings from this study indicate that the curriculum is being focused on increasing levels of self-efficacy and may lead to improved levels of academic performance. Due to college students who are academically at-risk typically having lower levels of self-efficacy (Hsieh et al., 2007) it is essential that these students be targeted and instructed in a way that enables them to foster and develop self-efficacy. The results from this study reflect that even though the students entered the class with some level of self-efficacy, they finished the class with higher levels which may lead to improved academic performance in the classroom. It is important to consider students’ levels of self-efficacy when entering college because it has been found that self-efficacy affects students’ academic achievement as well as influences the academic goals they set for themselves (Zimmerman, Bandura, & Martinez-Pons, 1992). Self-efficacy and social support have been found to be linked with levels of higher life satisfaction (Coffman & Gilligan, 2002). This course was designed to provide students who were academically at-risk with an additional social support to be accessed for assistance. If classes such as the learning strategies course can be offered to at-risk students, they may be able to increase levels of self-efficacy to a point where students set appropriate academic goals for themselves to improve their academic performance.

Students who are not prepared to study at the collegiate level tend to perform more poorly academically and have low levels of motivation to succeed (Balduf, 2009). The aim of this study and the learning strategies course was to introduce these necessary study skills and learning strategies to at-risk students to not only improve their academic performance, but to improve their levels of motivation as well. For a few of the sessions, the curriculum of the course focused on the creation of feasible mastery and intrinsically motivated goals as well the study skills necessary to achieve such academic goals (Balduf, 2009; Eppler & Harju, 1997; Haynes et al., 2008). As the results indicated from the one achievement motivation scale, this did occur. As other studies have found, when students are motivated to learn due to the desire, to at least partially, master a task rather than when students are motivated to not exhibit a lack of
knowledge, their academic performance is better (Hsieh et. al., 2007). The learning strategies course aimed not to only introduce study strategies, but to provide experiences for the participants to explore their academic goals and aspirations and develop levels of intrinsic motivation that are essential for success in college. The documented increase of achievement motivation provides evidence that the participants obtained some improved level of achievement motivation to perform well academically in their courses. It was essential that the learning strategies course focused on teaching mastery goals when possible due to their positive relationship with achievement motivation (Eliot & Church, 1997). It is possible that if the participants created goals that focused on the mastery of a subject or task versus a grade, they might have experienced the found increase in achievement motivation and are more intrinsically motivated to study and perform in their other academic courses.

It is promising that one of the achievement motivation measures exhibited an increase from the beginning of the course until the end, even though the other two did not. The two scales that did not increase significantly from start to finish contained more items that pertained to the learning strategies course in particular whereas the broader achievement motivation scale contained items that referenced the participants’ academic lives as a whole rather than just the one course. It may be a possibility that the students did not report an increase in the other two measures of achievement motivation due to the items having a focus on just that particular course. If the items referencing the participants’ academic careers applied more accurately to their levels of motivation outside of the one class, it may have contributed to the reported increase in levels of achievement motivation. While analyzing the results from the scales that did report increases as well as the scales that did not, the phrasing and general construction of the items should be considered. If the participants interpreted an item in a way that varied from its intended purpose, this may result in an altered score. As previously stated, the two scales that did not experience a significant increase featured items that were written in a manner that possibly lead to the conclusion that those items were focused solely on experiences within the learning strategies course and not throughout their academic experiences as a whole. For example, “I often feel lazy or bored when I study for this class and I quit before I finish what I planned to do”, “I like what I’m learning in this class” and “Even when the course materials are dull and uninteresting, I manage to keep working until I finish.”

Certain items were chosen and implemented into the survey from the MSLQ to gather further information on the variable of achievement motivation. After the data had been gathered and analyzed it was determined that the participants reported a slight decrease in the mean of the posttest sum scale score from the pretest sum scale score. After the particular items were reviewed from this scale, it was determined that some of the thirteen items were written in such a fashion that if a participant did not care for their particular section of the course or their individual learning specialist, it would be possible to report scores that indicated a decrease in an individual’s level of perceived achievement motivation. Additionally, the first time the survey was administered, it would have been difficult for the participants to provide an accurate response to some of these items due to them having attended only three classes at that point.

Another potential reason for the decrease could be partially attributed to the fashion in which the participants responded to each item. One of initial three scales featured responses based on a Likert scale of four options and the other two featured five response options, all with descriptions of what each response selection indicated. The items from the MSLQ features seven potential response options and only the first and seventh options have descriptions attached to them (1=Not very true at all & 7=Very true of me). The number of responses provided may lead
to reduced levels of reliability (Chang, 1994). This combination of factors should be considered when interpreting the results of a decrease in achievement motivation as measured by particular items from the MSLQ.

Previous studies have examined academic improvement after students have taken similar courses by analyzing their GPAs both before enrollment in a course and after. It has been found in the past that courses similar to the learning strategies course discussed here have been related to increased GPAs (Abrams & Jernigan, 1984). When the course began in August, the thirty-two students enrolled had an average cumulative GPA of 1.76. As stated previously, the aim of this course is to provide students with the study skills, organization strategies, time management techniques, and other tools to succeed within the classroom and in college life in general. One way this success can be measured is by examining GPA. The thirty-two students had an average GPA of 2.06 at the conclusion of the learning strategies course. As is evidenced by the increase in the students’ cumulative GPAs, it is a possibility that the learning strategies course had some impact on the thirty-two students experiencing this improvement in their GPAs. The average pre-GPA would have placed the students in the university’s at-risk classification and the post-GPA would have placed the students in the university’s academic good standing classification.

The increase in the participants’ GPAs is not necessarily due to exposure to the learning strategies curriculum. There are multiple variables the participants were exposed to during the time of the course that may have had an impact on their GPAs. As mentioned previously, the majority of the students enrolled in the course were academically at-risk. For some of the students, they were required to be in this course in order to avoid being placed on academic probation. The motivation to avoid this consequence may have played an important role in increasing academic vigor. Some students may have switched majors and are taking less strenuous courses leading to an increase in GPA. Some students may have started major courses and had a stronger academic investment in the course. A multitude of factors outside of the learning strategies course may have had a positive impact on the students’ academic performances contributing to the increase in GPA outside of the ones listed. At this time, the learning strategies course cannot be considered the only contributing factor the participants’ increase in GPA, but it can be considered as one potential contributing factor due to the fact that is a variable all of the participants had in common.

Limitations

Although precautions were taken to protect the integrity of this study and the concurrent results, there are some limitations that may have impacted the findings. First, although a common curriculum is applied in all of the sections of the learning strategies course, each section is taught by a different learning specialist. This factor could lead to slight changes in the way the content was delivered to the participants enrolled in the course. Even though the curriculum for each section is similar, the learning specialists had the opportunity to add pieces of content into their sections that the other learning specialists did not. This might impact the results found in this study because the students did not all receive an identical intervention in the form of a standardized curriculum. The main topics covered within the course were the same, but the activities used to cover the content may have varied slightly from section to section. That being said, the learning specialists did collaborate often for ideas on how to deliver the information efficiently.
A second limitation regards the response of the participants. Although the study concluded with a total number of 17 participants, there were more students who completed the pretest and were not present for the post-test and some students who chose not to participate in either attempt. This lower than expected return rate inhibits the ability of the results to be generalized to the general population of the campus. Important information was still analyzed through these participants, but these results are true only to the students who partook in the study. A recommendation for future related research would be to select a sample size that has an initially large number of potential participants and to implement different strategies to ensure a higher response rate in order to achieve more generalizable and inclusive results that can result in a more influential outcome.

The fact that each student who participated in the course and the study are enrolled in a variety of majors and programs should be considered. The sample, although small, is still diverse in its makeup and educational backgrounds. Although the participants were considered at-risk, they may have gotten to this point in their education by different means. The study could not control for what majors they were, courses they were in enrolled in at the time, and other different motivating factors. Although the participants reported increased levels of self-efficacy and on one measure of academic motivation, it is not known whether these increases were the result of being enrolled in more enjoyable or feasible coursework. This is an important factor that must be considered when analyzing the reliability and validity of the study’s findings. Although the participants were all enrolled in the learning strategies course, they came from different and various educational backgrounds.

Another limitation to consider regards the items utilized from the CAMS to measure achievement motivation. This tool is relatively new and psychometric properties were still being collected and analyzed during the time when this study took place. Although no reliability or validity statistics have been gathered at this point, the Cronbach's Alphas in the current sample did indicate that the items within the two separate scales had good to excellent internal reliabilities. This should be considered a limitation though because other reliability and validity statistics on a broader sample were unavailable.

It should also be considered that on two of the scales used for the instrument, not all seventeen participants’ responses were used. On the CAMS-Achievement Motivation scale, only sixteen of the participants’ responses were used due to one of the participants not filling out one item on the posttest. On the MSLQ scale, only sixteen of the participants’ responses were used due to one of the participants not filling out eleven of the items on the pretest. These absent pieces of data should be considered because they may have had an impact on the final results had they been submitted correctly. When completing the analyses, the program used accounted for these missing data pieces, but had they been provided by the participants it may have impacted the final results from the tests used.

At the beginning of the course when the participants completed the survey, some of the items were written regarding content of the course and curriculum that they had had minimal exposure to at the time, potentially leading to reported scores that may not have been an accurate representation of the constructs being measured at that time. Particular items throughout the instrument required background information regarding the learning strategies course in particular. At the time of the initial administration, the participants had only experienced three course sessions, thus limiting their abilities to answer the corresponding instrument items appropriately. The post-administration of the instrument may be a more accurate and valid representation of the participants’ responses on these particular items due to having been in the
learning strategies course for fifteen weeks. In future research, these particular items should be revisited and potentially re-scripted in order to provide a more accurate representation of the participants’ responses on the pre-administration of the instrument as well as the post-administration.

The limitations listed regarding the current study indicate that there are various questions regarding the impact of the described learning strategies course on levels of self-efficacy and achievement motivation unanswered. The research reviewed suggests that learning strategies courses and other interventions utilized to improve academically at-risk students’ academic performance have also been found to lead to increased levels of self-efficacy, achievement motivation, and academic performance (Abrams & Jernigan, 1984; Balduf, 2009; Campbell & Campbell, 2007; Chemers et al., 2001; Chiteng Kot, 2014; Coffman & Gilligan, 2002; Eppler & Harju, 1997; Haynes et al., 2008; Heisserer & Parette, 2002; Hsieh et al., 2007; Lent et al., 1987; Multon et al., 1991; Perry et al., 1993; Smith, 2013; Swartz et al., 2005; Vivian, 2005). Future research should focus on utilizing a more standardized curriculum between multiple sections of learning strategies courses to ensure fidelity across various classes. In addition, future researchers may benefit from gathering data from courses similar to the one studied here from multiple universities in order to obtain an accurate representation of the impact these courses are having on students’ academic performances and levels of variables being measured.

To understand the differences and discrepancies between academically at-risk students and students who are performing well, efforts could be made in the future to gather data regarding levels of self-efficacy, achievement motivation, and GPAs from students who are not enrolled in the learning strategies course. From this data, growth could potentially be measured and compared to the growth experienced by the students who were enrolled within the learning strategies course. Although the initial results examined throughout this report are promising in regards to academically at-risk college students’ levels of self-efficacy and achievement motivation, it is evident that changes are necessary in future research to gather more valid and influential data in order to create the most efficient and effective interventions for students who struggle academically.

**Recommendations for Future Research**

Although the findings of this research suggest positive impacts on academically at-risk college students through the learning strategies course, there are ways this research could be improved upon in the future to ensure a more comprehensive study with valid results. Investigating which specific aspects of the course are most effective to the students is an area that could be further explored. With this variable examined, the creators of the curriculum could harness the effectiveness of these pieces into additional lessons that would affect the students even further. A larger sample size may positively affect the validity of the study as well. The findings could be further generalized to the student population if the sample was more representative of the population.

Another recommendation for future research is to attempt to better control all variables that may affect any improvements in students’ GPAs. As was mentioned in the limitations section, it cannot be completely assumed that the learning strategies course had a causal relationship with the increase in students’ GPA, self-efficacy, and achievement motivation increases. An option could be to have students who are not academically at-risk enroll in the learning strategies course and examine if the same variables experience increases or decreases.
This would help to control for the variable of students GPAs increasing due to them being at-risk for suspension.

A final recommendation for future research is having each section of the learning strategies course be taught by the same instructor with the same lessons to ensure that the students are receiving identical instruction and assistance in their areas of academic need. This would enable the researcher to better control for variability in instruction and lessons. Although this study had a common curriculum, the instructors had the ability to modify and adjust the lessons as they saw fit, which may have led to the participants receiving slightly different instruction. If these recommendations for future research are applied to a similar study, the results may yield more accurate and representative findings that can help construct and improve lesson plans and curriculum to better equip college level students to succeed in all of their classes.

Conclusion

The current study was conducted to examine the impact a learning strategies course offered at a mid-sized, public university had on college students’ levels of self-efficacy and achievement motivation. The students enrolled in the learning strategies course were academically at-risk and the curriculum of the course was geared toward teaching the students various study methods, time management skills, organizational techniques, and providing access to campus academic resources among other topics. Results indicated that from the beginning of the course to the end, the participants experienced a statistically significant increase in levels of self-efficacy and on one measure of achievement motivation. A second measure of achievement motivation was utilized where no significant increase was experienced and an additional achievement motivation measure was added and the participants experienced a decrease in this overall scale. It should not be considered that the learning strategies course had sole impact on these changes, but it was a constant variable between the seventeen participants that reported both pre and posttest data. It was the aim of this study to examine how a combination of the different techniques discussed in the literature review impacted the levels of self-efficacy and achievement motivation in academically at-risk college students. Future research can potentially build on the findings of this study to create a curriculum for similar learning strategies courses combining different academic assistance methods to better impact students’ levels of self-efficacy and achievement motivation and, in turn, lead to improved GPAs and academic performance.
References


