2-14-2024

Using Self-Regulated Learning to Increase Academic Performance in NCAA Student-Athletes

Lee Ann Grandison
Walden University

Walden University

College of Education and Human Sciences

This is to certify that the doctoral study by

Lee A. Grandison

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Joanna Karet, Committee Chairperson, Education Faculty
Dr. Heidi Crocker, Committee Member, Education Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2024

Abstract

Using Self-Regulated Learning to Increase Academic Performance in NCAA Student-Athletes

by

Lee A. Grandison

MS Exercise Science, California University at Pennsylvania, 2009

BS Psychology, Christopher Newport University, 1998

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

February 2024

Abstract

The problem in this project study is that too many student-athletes earn less than a 2.39 grade point average at the study university. The purpose of the project study was to evaluate the self-regulated learning (SRL) skills of student-athletes to determine if there was a statistical difference in skills used among academically challenged and academically successful student-athletes. The study involved using Barry Zimmerman's theory of SRL. An experimental, descriptive research design was employed to study the SRL skills of student-athletes at the study university. Participants completed the Motivated Strategies for Learning Questionnaire to determine their study habits and SRL skills (N = 48). Data determined no significant differences in terms of SRL skills among academically challenged and non-academically challenged student-athletes. Engaging student-athletes to enhance their study and learning skills could decrease the number of academically at-risk student-athletes, increase graduation rates at the study university, and provide students pathways for positive social change with lifelong learning skills that could improve socioeconomics for themselves and their communities.

Using Self-Regulated Learning to Increase Academic Performance in NCAA Student-Athletes

by

Lee A. Grandison

MS Exercise Science, California University at Pennsylvania, 2009

BS Psychology, Christopher Newport University, 1998

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

February 2024

Dedication

My doctoral degree is dedicated to the generations of women scholars who came before me. This accomplishment is my legacy as a fourth-generation educator.

Table of Contents

List of Tables

Section 1: The Problem

The Local Problem

The National Collegiate Athletic Association (NCAA) governs athletic programs of over 1,200 higher education institutions in the United States (NCAA, 2023). Increased awareness of the NCAA regarding academic performances of college athletes has brought additional attention to issues of some student athletes in terms of maintaining satisfactory academic performance. Student athletes must maintain a grade point average (GPA) of 2.0 on a 4.0 scale to be eligible to compete in collegiate sports.

Eastern Central University (pseudonym for the local study site) is a NCAA Division 1 historically black college and university (HBCU) dedicated to educating underprepared and underrepresented college students. The university is an urban institution that is committed to engaging students through dedication to the community and opportunities for higher education. The problem in the proposed project study with Eastern Central University concerned the number of student athletes maintaining a GPA of at least 2.39 while competing in college sports. Student athletes earning a GPA between 2.39 and 2.0 (red-shirted) are considered academically at risk but are still allowed to compete in university sports. Student athletes who do not maintain a GPA of at least 2.0 are ineligible to compete in college athletics, decreasing the NCAA ranking for the university. Many athletes are academically underprepared for college academics but have access to higher education because of their athletic talents (David, 2015). The high school grade point average of admitted first-year students at the study university is 2.92 on a 4.0 scale, while the average SAT score of entering students is between 620 and

860 (Collegedata, 2023). Eastern Central University enrolls 277 student-athletes, representing six percent of undergraduate enrollment. The minimum GPA student athletes must acquire to be recruited to the university is 2.30 on a 4.0 scale. There is a lower GPA required for admittance to the university as a student athlete compared to students enrolled by general admission. These student athletes may not have self-regulating learning skills that are necessary to manage university-level academic excellence and compete in collegiate sports (Hensley et al., 2015). Comparing self-regulating learning skills of at-risk to academically achieving student-athletes will lead to insights regarding potential learning and study needs of this population. Therefore, there is a need to investigate self-regulated learning skills for student-athletes to balance academic excellence with athletic performance.

Rationale

Even with academic progress rates (APRs) increasing in most universities, HBCUs continue to rank lower than their athletic and academic peers. After the 2020-21 academic year, most penalties for academic ineligibility were issued to HBCUs (NCAA, 2023).

- 8 of 10 universities that were issued post-season academic ineligibility penalties were HBCUs.
- 5 of eight universities that were issued level 1 academic penalties were HBCUs. Level 1 violations involve practice time restrictions and more time for educational interventions.

- All eight universities that were issued level 2 penalties were HBCUs. Level 2 violations are a combination of level 1 penalties and a four-hour reduction of post-season practice time.

The low academic performance of student athletes is a concern for athletic and academic communities at the local university. The poor academic performance of Eastern Central University athletes has led to unacceptable APRs to the NCAA. The university has been cited multiple times in various sports for low APR scores, which have led to NCAA penalties and citations.

- The men's baseball team had an APR score of 959 during the 2020-2021 academic year. The team earned a 17-point drop in scores from the previous year. They were placed on a level one NCAA academic penalty in 2012, resulting in a reduction of practice time (NCAA, 2023).
- The men's indoor track team (four-year APR 957) was placed on level 1 and level 2 academic penalties in 2013 (NCAA, 2023).
- The men's outdoor track team has a 2021 APR score of 947, down 26 points from 2019. The team received both a level 1 and a level 2 NCAA academic penalty, resulting in practice restrictions, postseason ineligibility, and in-season/out-of-season activity restriction in 2013 (NCAA, 2023).
- The men's basketball team reported a 4-year average academic progress rate of 962 (NCAA, 2023).
- The women's basketball team won the MEAC (Mid-Eastern Atlantic Conference) division championship during the 2022-2023 season. However, the team has

> steadily decreased its APRs for the last three seasons. The team's score fell from 958 during the 2017-2018 academic year to 937 during the 2020-2021 academic year (NCAA, 2023).

Low academic performance may lead to lower graduation rates for student athletes. The National Center of Educational Statistics (NCES, 2021) said graduation rates within 4 years were 15.6%, 32.3% within 5 years, and 37.1% within 6 years.

Strategic initiatives at the study university involve addressing academic success and graduation rates, but nothing has been specifically established to address educational needs of student athletes. Additional academic interventions that focus on improving GPA and study skills for this specific population of students are needed.

Self-regulated learning (SRL) skills improve athletic performance of collegiate student athletes (Kitsantas & Zimmerman. 2002). The current project study involved identifying differences in terms of SRL skills between academically-successful (2.4 and higher) and academically-challenged (2.39 and lower) student athletes. Results of SRL evaluation guided the direction of a curriculum that was designed to target improving SRL skills for academically challenged student athletes. I directly addressed interventions for improving academically challenged student-athletes' study and learning habits.

Definitions of Terms

Cognitive and Metacognitive Strategies: Rehearsal, elaboration, organization, critical thinking, and self-regulation strategies that are used to learn and recall new concepts (Pintrich et al., 2013).

Control Beliefs: Students' beliefs that learning will result in positive outcomes (Pintrich et al., 2013).

Extrinsic Goal Orientation: The degree to which students may perceive themselves to be participating in a task (Pintrich et al., 2013).

Intrinsic Goal Orientation: Intrinsic goal orientation refers to perceptions of reasons to participate in learning tasks (Pintrich et al., 2013).

Resource Management Strategies: Time and study environment, effort regulation, peer learning, and help-seeking methods that are used by students to enhance the learning process (Pintrich et al., 2013).

Self-Efficacy for Learning and Performance: Students' beliefs that they can complete a task (Pintrich et al., 2013).

Task Value: How valid completing the task is to the student (Pintrich et al., 2013).

Text Anxiety: Worry students may have involving test performance that disrupts test-taking abilities (Pintrich et al., 2013).

Significance of the Study

Study results could assist the local university in terms of improving their academic intervention programs for the academically challenged student athlete population, increasing the number of academically-successful student athletes. Current academic interventions at the local university include mandatory study halls and laptops for student athletes. At the study university, no academic learning interventions involve athletes' study/learning skills or academic self-regulation. Academic support teams and the entire university community need statistically-effective academic intervention

programs that are developed to support student athletes (Stokowski et al., 2017). Results of this study could also be applied to academic interventions for academically challenged student athletes at other NCAA Division I universities. Increasing the number of academically successful student athletes would increase graduation rates, improve APRs, and decrease misconceptions about the academic abilities of student athletes.

Research Question

I aimed to determine if there was a significant difference in terms of using SRL skills among academically-challenged and academically-successful NCAA Division I athletes.

RQ1: Are there significant differences in terms of SRL skills among academically successful (GPA 2.4 and above) and academically challenged (GPA 2.39 and below) student-athletes at the study university?

$H_0 1$: There are no significant differences in terms of SRL skills between academically-achieving and academically-challenged student athletes.

$H_a 1$: There are significant differences in terms of SRL skills between academically-achieving and academically-challenged student athletes.

Review of the Literature

Theoretical Framework

SRL refers to the proactive self-directed processes and self-beliefs that enable learners to transfer their mental abilities into academic performance (Zimmerman, 1989). Zimmerman (1989) assumed motivation orientation and strategy by learners is sustained by self-efficacy when performing a task. Learners must be highly aware of their goals

and believe they can be achieved. SRL has its roots in social cognitive assumptions of learning and social learning constructs. Original views of SRL involve triadic causation of three learning influences: the person, environment, and behavior modifications (Zimmerman, 1989). Self-efficacy, or the belief that a goal can be accomplished, is considered the primary area of personal impact. Environmental impact follows the same influences as social cognitive theory and research. Learners will evaluate and manipulate their environment to maximize knowledge acquisition. Behavior modifications affect decision-making processes and performance outcomes. Activities include planning and task analysis of academic demands, attentiveness to academic goals, persistence of goals, and monitoring strategic outcomes (Zimmerman, 1988).

Zimmerman (2008) aimed to determine effects of an urban environment on the self-efficacy of 100 first and second graders. Students failed to solve a puzzle and believed they were unable to complete similar tasks. Zimmerman assumed students' self-efficacy affected their ability to perform a new task. Efficacy rewards increased students' perceptions of other intellectual tasks. Zimmerman observed learners use strategies such as environmental structuring, seeking assistance from teachers, and reviewing information to achieve their performance goals. This observation led to his theory of SRL. Students and educators perceived self-regulation as a single concept instead of a collective of activities (Zimmerman & Pons, 1988). The triadic formation of environmental, behavioral, and personal influences of self-regulated learning interest educators to increase students' learning potential. Enhancing students' self-regulating processes, including self-efficacy and effective strategies, would improve academic

performance (Zimmerman, 1989). As the study of SRL theory evolved, three subprocesses emerged from research: self-observation, self-judgment, and self-reflection. These performance-based subprocesses interact in a reciprocal manner and directly influence academic outcomes (Zimmerman, 2008).

The tricyclic model for SRL combines personal, environmental, and behavioral influences with performance subprocesses of learning (Zimmerman, 2002). The three official phases of the tricyclic SRL module are forethought, performance, and self-reflection (Cleary & Zimmerman, 2001). Components of the forethought phase are motivation, goal setting, strategy choice, and self-efficacy. The performance phase consists of self-monitoring and time management. The self-reflection phase encompasses self-evaluation, causal attributions, and self-satisfaction attributes (Zimmerman, 2001). All three phases of the cyclic model are interdependent. An item learned in the forethought phase would produce changes in terms of performance and self-reflection. A special feature of the tricyclic model of SRL is its empirical use in the research of both athletic and academic performance.

Cleary and Zimmerman (2001) investigated self-regulatory differences between expert, non-expert, and novice basketball players during free throw drill practice. The forethought phase consisted of their feelings concerning the task goal of successful free throw shots, performance of mistake correction strategies, and self-evaluation of managing thoughts and feelings concerning performance goals. Players with high self-regulated learning skills would use selective and adaptive strategies to learn from failed shots and select specific goals for task improvement (Zimmerman, 1989). Players were

assessed and separated into groups according to statistics into expert, non-expert, and novice categories. They were observed during practice and interviewed afterward regarding their use of self-regulatory skills. Expert players displayed high self-regulating behaviors and used more specific technique-related strategies for improvement gained from their sports experiences. Expert players also set particular goals and exhibited higher self-efficacy in terms of outcomes of their free throw attempts. Nonexpert players displayed lower self-regulation by reporting low self-efficacy perceptions of task completion, no specific goals, and choosing effective learning strategies which impeded free throw skills development. Increased use of SRL skills resulted in increased skill during free throw practice (Cleary & Zimmerman, 2001).

Kitsantas and Zimmerman (2002) aimed to determine if the same methodology would produce the same results for different learners across genders, levels of education, and sports tasks with expert, non-expert, and novice volleyball players who used volleyball service skills as the learning task. Continuum of SRL strategies used by athletes resulted in an increase in volley service skills. Expert volleyball players far surpassed nonexpert players during both the forethought and self-reflection phases.

Zimmerman (2002) addressed 40 female and 10 male university students from physical education classes. They selected novice players to train using different combinations of SRL phases. Novice players were placed in one of four groups for lessons on improving one phase, two, or all three phases of self-regulation. The fourth control group of players did not receive cognitive instruction but was given additional opportunities to practice. One phase group lessons involved improving goal setting, while

two phase group lessons concentrated on improving goal setting and performance controls. The third group was given teachings on forethought, performance, and self-reflection phases with task orientation. Results indicated increased SRL skills and free throw performance with novice players. Training novice players in the concepts of the SRL cyclic model resulted in the most significant performance improvement (Cleary et al., 2006).

The cyclic model of SRL was studied in low and high-achieving high school science students. The study was a purely cognitive approach to studying the cyclic model of self-regulated learning. The study aimed to address both the gender assumptions in science and the specific psychological learning process for students in science-based learning. The participants were fifty-one 11th-grade students. Each participant was tested on a science task to read and study and assessed for self-regulated learning. Results indicated no significant difference between gender and the ability to complete a science task. There was a significant difference in SRL skills reported by students who scored high in science achievement. Higher achieving science students measured significantly higher on all three phases of the cyclic model. The combined research supports the cyclic self-regulated learning model and a trainable factor for individual phase skill improvement (DiBenedetto & Zimmerman, 2010).

Moos and Miller (2015) aimed to investigate SRL skills across learning tasks in terms of motivation of knowledge acquisition, emphasizing the forethought phase of SRL. Two learning tasks were selected to determine SRL skills that were used to acquire new knowledge. One learning task subject, constructionism, was considered a high

motivational value task for future teachers. Learning tasks on the circulatory system were considered low-value tasks. Think-aloud data were collected to determine SRL skills for each learning task. There were significant differences in terms of self-efficacy and task value between learning tasks (Moos & Miller, 2015). Specific learning strategies increased along with motivation in terms of learning high-value subject tasks. The motivation subphase dynamically impacts and supports both performance and self-reflection phases (Zimmerman, 2008).

Many tools and methods are available to measure learner SRL skills among higher education learners. Roth et al. (2016) determined tools that were most suited for empirical research. Methods of assessment were various questionnaires, interview styles, think-aloud techniques, and learning diaries. Instruments found also focus on specific to general learning tasks and can examine learning competencies. Results of instrument analysis were that 225 different studies used varied and created methods of measuring SRL. Ninety-five percent of instruments involved behavioral strategies for learning, 42% were course or domain-specific, and 7.56% used online learning standards. The MSLQ was the most used and verified instrument in SRL research. The MSLQ is the survey of choice to examine SRL and study skills among collegiate student-athletes.

Review of the Broader Problem

Many students have challenges transitioning from secondary education to college. Challenges involve increased academic rigor, responsibility for personal financial governance, and social change in campus life. Challenges are more significant for collegiate student athletes with added demands of time management for sports practice

and competition. NCAA Division 1 student athletes also have the added stress of expectations regarding academic and sports excellence (Yukhymenko-Lescroart & Ariya, 2022). Kargiorgakis and Blacker (2021) investigated potential similarities in terms of stress, academic performance, and academic engagement between U.S. college student athletes (USCAAs) and non-athlete students in a college not associated with the NCAA and indicated a positive correlation between stress and GPA for both groups. No significant differences were found between stress and academic engagement or stress and academic performance. Within the USCAA group, there was no significant difference in terms of GPA, stress, sports enjoyment, and academic engagement. Additional research needs to be conducted to determine if sports participation at an NCAA college or university is an additional stress factor which leads to low academic performance for collegiate student athletes.

A situation that all student athletes encounter is balancing their dual identities as college students and athletes. For student athletes to thrive, they must commit full attention to academic success and sports performance excellence (Hextrum, 2020). O'Neil et al. (2021) investigated how NCAA Division 1 student athletes negotiated demanding roles and commitments of being both students and athletes and suggested dual commitment profiles that were characterized as enthusiastic-dominant were associated with high school sports, psychological wellbeing, and low burnout. College student athletes may need extra support services that cater to being both students and athletes to assist with establishing a balance.

Many student athletes have a passion for playing sports and identify as athletes more than identifying as students (Karagiorgakis & Blaker, 2021). The average NCAA D1 player spends 34 hours a week during their competitive seasons preparing for sports competition and 38.5 hours a week on academics. Yukhymenko-Lescroart (2022) examined if academic identity could positively predict academic outcomes and if athletic identity negatively predicted academic outcomes among187 student-athletes who were 69.5% female, 56 % White, 59% first-generation college students, and 64% who were attending college for both academic and sports reasons. Participants had stronger identities as athletes than academics. Their academic identity positively correlated with academic performance and academic persistence. There was no significant correlation between athletic identity and academic performance. Female student athletes reported higher academic performance and persistence than their male colleagues. First-generation student athletes reported lower academic performance, persistence, and identity than non-first-generation college athletes.

Hextrum (2020) found the social stereotype of the dumb jock can foster student-athlete underachievement. Academic clustering is a method of enabling poor academic performance by placing athletes in classes designed just to provide an grade and not a learning experience . Academic clustering occurs when more than 25% of the student athlete population primarily enrolls in the same major. Athletes are clustered in less academically rigorous programs that facilitate maintaining sports eligibility (Goodson, 2020). This is unacceptable among academic leaders but still practiced in many universities with high revenue-generating sports programs. The research used life-based

interviews with study participants to give their experience as Division I NCAA student-athletes. All participants experienced conflict in terms of balancing athletic performance and academic excellence. All athletic-academic support programs should aim to guide student athletes in order to decrease their perceived conflict between academics and athletics.

Not all the interventions to address academically challenged athletes have been developed, with academic achievement as the end product (Stokowski, 2020). Certain universities have addressed the issues with academically challenged student-athletes with the unethical practice of academic clustering. Case, Dey et al. (2017) conducted a study on academic clustering. Academic clustering refers to athletic-academic advisors enrolling more than 25% of a single team into one academic program. These programs foster the students academically and almost guarantee passing grades to maintain athletes' academic eligibility to compete. The consequence of academic clustering is program selection for the student-athlete without contemplation of long-term career goals, which is the purpose outcome of higher education. The study aimed to survey academic advisors' attitudes toward the frequency and scope of academic clustering. The sample population was 97 Division I university academic advisors. Results of the survey indicated 72.6% perceived academic clustering was prominent in mostly Division I universities with large football, income-generating programs. Results also indicated that academic clustering could result from advisor employment being driven by the number of student-athletes remaining eligible to compete. Suggestions from the data collected included replacing the unethical practice of academic clustering with better recruitment

processes focusing on both aspects of scholarship and athletic performance. It was also suggested that quality academic support programs and practices that address the needs of academically challenged student-athletes be developed. Increasing the study and SRL skills of student-athletes could increase athletes' academic performance and graduation rates. The athletic academic advisors would no longer need to consider unethical practices.

Academic clustering is being investigated among all NCAA divisions with HBCUs. Previous studies have focused on just Division I HBCU revenue-generating sports without regard for DII and DIII non-revenue-generating sports. Goodson (2020) gathered data on student-athletes attending 22 different HBCUs. Eleven universities were in Division 1, and 11 were in Division II. Results indicated academic clustering was found at all 22 universities in the study. Additional research is needed to determine the primary reason for the prevalence of academic clustering. Reasons indicated by individual student-athletes for their choice of academic programs during the study included avoiding faculty that may have a resentment against student-athletes, registering for classes with faculty that are flexible with student-athletes, majoring with team members, and selecting programs that would allow the student-athlete to dedicate less time to academics. These rationales suggest the need for more academic interventions that support student-athletes instead of poor advisory practices that enable conflict between academics and athletics (O'Neil et al., 2022).

A coach's philosophy of academics significantly influences the view of academic performance among student-athletes (Stokowski, 2020). Smalls (2020) explored the

concept of a balanced, holistic student-athlete experience from the perspective of basketball coaches. He conducted a case study of six NCAA Division 2 basketball coaches from a single HBCU. Coaching practices and academic, social, and athletic development positions were areas investigated. Results of the study indicate that these coaches believed a holistic student-athlete experience must include support for academic excellence in student-athletes, a core value of the NCAA. Emerging themes from the study also included the need to assist student-athletes in developing a balance between academic, social, and athletic responsibilities. All study participants agreed that coaches should support academic development and excellence with athletic performance to retain more well-rounded students in their sports programs.

Existing research on academics with student-athletes suggests that faculty, staff, and non-athlete students have a poor view of student-athletes and their abilities for academic success (Stokowski, 2020). Stokowski et al. (2020) investigated the views and perceptions of student-athletes by academic advisors. The study participants were 155 academic advisors from five NCAA D1 power institutions. These advisors reported their beliefs that student-athletes academic motivation varied by sports participation, the athletes prioritizing sports participation over academic success, the athletic department enabling student-athlete's lack of academic motivation, and the athlete department being void of academic advisors. The study results imply that academic advisors correlate the student-athletes' academic performance with the organization and broader culture of the athletic department. Developing more self-regulated student-athletes would provide the

tools for them to have a more independent view of their academic performance (Hextrum, 2020).

SRL to Improve Study and Learning

Self-regulated learning skills are essential for academic success (Barth, 2020). The skills can also be used as a strategy for academic interventions for low academic achieving students. Hajiabadi et al. (2023) examined training in SRL skills and using a learning diary to improve academic performance in low-achieving medical students. A group of medical students from one course were selected for the intervention program and trained in using SRL skills while keeping a diary of their learning journey. There was also a control group of students from the course that were not trained. Pretest and post-test results determined that both SRL inventory scores and course grade point average were significantly higher than in the control group. There was no significant difference in overall GPA between the intervention and control groups. The researchers determined that training the low-achieving medical students in SRL skills contributed to their improved course grades.

Physical therapy (PT) practitioners face a rapidly growing field of medical science, technology, and ever-changing challenges of recovery health care. There is a growing concern among PT educators that traditional methods of instructor-led transfer of knowledge are not preparing the next generation of therapists to be proactive in their continuing education. Teaching SRL skills could be an effective teaching methodology among PT educators and is considered adequate for life-long learning (Baldan-Babayigit & Guven, 2020). Self-efficacy among PTs infers the ability to learn the medical aspects

of therapeutic care and the ability to execute the profession's skills. Teaching task-specific confidence is critical in the professional development of novice PT. Van Lankverd et al. (2019) investigated using a curriculum focused on SRL versus traditional instructor-led methods in Physical Therapy education. Participants for the study were second-year PT students in the Netherlands. After one year of traditional instructor-led courses, students could select a new SRL physical therapy curriculum for their second year of study, emphasizing self-efficacy in task-specific tasks. Even with the study results indicating no significant difference in self-efficacy between the groups of students in traditional instructor-led and SRL-focused curriculums, researchers suggest that a digital program to enhance SRL and study skills would benefit students using digital/LMS-driven programs.

Antonelli et al. (2020) gathered participants for the study among full-time degree-seeking College of Education students. The groups consisted of students who indicated they were first-generation (*N*=28), non-first-generation (*N*=530), and those of unknown status (*N*=96). Each group was issued the Learning and Study Strategies to measure the strengths and weaknesses of their self-regulated learning skills. The research results indicated that all three groups scored below the 50^{th} percentile interpretive cut-off scores for several measured areas of self-regulated learning. Implications for practice suggest that all students would benefit from engaging in activities to improve their SRL skills.

The use of SRL skills on grade point average was studied among first-year college students. Many college students attempt to balance social activities and employment at the expense of academic study. Research suggests the need for additional

time management skills to assist students with academic work/life balance. One of the phases of SRL is forethought or planning, which is essential to academic success. Thibodeaux et al. (2017) determined the extent of the relationship between planned time use, SRL skills, and actual GPA. The team hypothesized that students with high SRL skills would invest more time in academic learning over social activities. The study participants were 589 first-semester undergraduate students and were assessed for SRL skills using the Motivated Strategies for Learning Questionnaire (MSLQ). They were also given surveys on their planned and actual time spent on social, employment, and academic pursuits. Results of the data collected indicated that students who planned and executed more time for academic pursuits also scored high in SRL skills. Results also suggested that students with low SRL skills planned less time or planned and executed less time with academic pursuits. Time management skills were considered a necessary addition to the SRL skills of first-year college students (Sainz et al., 2019).

It is presumed that successful learning for students is attributed to solid motivation factors (Ergen & Kanadli, 2017). Researchers continue to study learning skills to identify and facilitate successful strategies for challenged learners. These strategies are sought after by all educators, especially those responsible for learning in higher education. Rashid and Rena (2019) aimed to identify the relationship between prospective teachers' level of motivation and their learning strategies. The participants of the study were 300 prospective teachers from the university in Punjab, Lahore. The participants were analyzed for motivation and SRL skills using the MSLQ and separated into either high or low-motivational learners. The result of the data collection revealed

that highly motivated prospective teachers have a weak positive correlation with all nine factors of SRL strategies—the prospective teachers with moderate motivation correlated with all but two learning strategies, peer learning and help-seeking.

Studies of college populations indicate a reciprocal relationship between self-efficacy and self-regulated learning. Self-efficacy appears to be the center of individual belief in their ability to execute a given task. Rao et al. (2019) studied the influence of academic self-efficacy and SRL on the clarity of career goals among college graduates. This study used the cyclic model of SRL and the Pintrich model as the theoretical framework. In the Pintrich model of SRL, the forethought phase of goal setting also includes career goal setting. The study participants were 90 postgraduate women seeking master's degrees between 20 and 24. Data scores were collected from an academic self-efficacy scale and a survey on self-regulated learning. Results indicated a strong interrelation effect between academic self-efficacy and SRL. Student-athletes could be encouraged to set their study methods facilitating self-efficacy as a part of SRL, which places the task of academic performance in the student's control.

SRL as a Teaching Strategy to Improve Academic Performance

With the amount of digital technology commonly used by university students, how students in academic pursuits use technology for self-regulated learning is still unknown. Researchers wanted to discover how students use technology to plan, organize, and facilitate learning. In response to this need for research, Yot-Dominguez and Marcelo (2017) incorporated demographic information, questions on SRL, and questions concerning the reasons for using various forms of technology. The survey was tested on

711 university students from seven different Spanish institutions. The survey results indicated that students use technology sparingly in SRL. The most significant uses of technology for SRL were for internet information searches and communication. Only 11% of the participants score high on SRL and high on technology use in education. The highest score in technology use was in the area of social interactions. Programmatic interventions developed from the results of this program study will use digital educational technologies to assist student-athletes with learning and study skills. All students were given an iPad Pro at the study university to help them access technology for improved academic performance.

Self-regulated learning was the subject of a study, along with how these skills can be enhanced through a virtual flipped classroom environment for academic achievement. As the use of educational technology advances, so does the use of different teaching methodologies within the technology environment. Flipped classroom environments can be defined as educational spaces where learners prepare for class time by reading texts, watching videos, and listening to podcasts to obtain foundational knowledge about the subject matter. The class time is then spent in active learning sessions with group activities to apply the foundational knowledge practically. It is suggested that the flipped classroom maximizes the core ideas of constructionist learning. The learning management system (LMS) Blackboard has developed a Mash-up application that can bring electronic content within the LMS to simulate the flipped classroom environment in the virtual learning space. El-Senousy and Alquda (2017) sought to determine if SRL skills are enhanced using Mash-up added to content in the virtual flipped environment

strategy. The sample population was 60 university students, 30 placed in the experimental group and 30 in the control group. The experimental group completed an online Comp 101 class using Blackboard LMS, and the control group completed the same class in a traditional face-to-face environment. SRL was measured in both groups before the start of the course, and at the end of the course, grades were used to determine academic achievement. The results of the data collected indicated no significant difference in SRL between the two groups of students before the start of the course. Data collected after course completion indicated a significant difference in SRL and academic achievement in favor of the experimental group. Students completing the course using a virtual flipped classroom with Mash-up content scored higher in post-course SRL and acquired a better end-of-course grade than students in the same class using the traditional method of instruction. Applications for the study's results suggest a course developed to improve SRL and study skills for student-athletes should include mash-up video technologies and active learning in a flipped classroom format.

The influence of interactive learning materials on SRL and learning satisfaction was also studied among teachers in professional development classes. Many professional development opportunities use information and communication technologies (ICT). In response to the United Nation’s Sustainable Goal of increasing provisions for qualified teachers through international collaborations with developing countries, more educators are provided with ICT-assisted teacher course materials. Li et al. (2018) examined the use of ICT interactive materials on SRL in teachers without any assistance from an instructor. The participants for the study were 285 primary school teachers enrolled in a virtual

teacher education program. A control group of teachers also received traditional instructor-led professional development. All participants were assessed using the MSLQ for SRL, the learning satisfaction survey, and a training effectiveness survey. Results indicated a significant difference in SRL skills engaged between the virtual and instruct-led class groups. There was also a significant difference in learning satisfaction and intention to apply the acquired knowledge in favor of the virtual learning group. The study results support previous research that quality multimedia interactive materials can enhance learner satisfaction in college-level education. Teaching student-athletes how to manage SRL and study skills could improve their learning capabilities while traveling during sports seasons. SRL skills could assist student-athletes in remaining diligent and current in their academic pursuits.

The potential influence of blended learning environments on self-directed learning (SDL) and self-regulated learning has been examined. With the increased number of studies focusing on SRL, Uz and Uzun (2018) emphasized the component of self-directed learning in their study of eLearning environments. This study aimed to determine which learning environment stimulates both SDL and SRL. The study participants were 167 undergraduate students placed in either an experimental group (N=60) or two control groups (N=107). The experiential group participated in a programming language class using a blended learning environment, and both control groups completed the same course in a traditional instructor-led environment. SDL and SRL were assessed before and after the completion of the course. Results of the pre-course data indicated no significant difference in scores of both SDL and SRL between

the experimental group and control groups. Results of post-course data showed a significant difference reported in both SDL and SRL within both experimental and control groups. The blended learning group also scored significantly higher on SRL than the control groups in post-course data.

Self-regulated learning skills are used by learners not only to improve academic performance but also to determine the help needed in learning processes. They must know the behaviors and cognitive influences of self-regulated learning skill development. Guidance and counseling services assist learners with behavioral changes and mental modifications. Pravesti et al. (2020) wanted to investigate the effect of guidance and counseling services on the behavior and cognitive influencers of developing SRL skills. They tried to determine the impact of interest, motivation, and behaviors to learn on self-regulated learning development. Results of the research determined that interest to learn and motivation/behaviors to learn with study habits are positive influencers on self-regulated learning skill development. The results also support new educational paradigms featuring guidance and counseling services as integral components of education programs.

Implications

A conclusion of the review of current research on self-regulated learning skills confirms its potential benefit in increasing the study and learning abilities of higher education students. Early research on SRL conducted by Zimmerman (2008) suggested its use as beneficial in improving athletic performance among both secondary and higher education student populations. The current study provided a survey to determine if SRL

skills are helpful for academic performance with the same population for which it improved athletic performance. With the study results, an SRL improvement skills workshop for student-athletes could be created to accommodate the academic needs of academically challenged and summer transitional freshman student-athletes. The collaborating university athletic academic support teams also plan to reinstitute the CHAMPS (Challenging Athletes Minds for Personal Success) life skills and learning communities at the study university with the information gleaned from the study. The study university is a recipient of an NCAA Accelerating Academic Success Program grant and will be reorganizing its current academic interventions program to include training to improve self-regulated learning for all enrolled student-athletes. By fostering student-athletes' academic excellence, the university can guide the athletes' passion for sport into social awareness and prepare them to be leaders of social change.

Summary

Research indicates SRL skills are essential for academic success in diverse student populations. The purpose of this project study was to determine if there were differences in terms of SRL skills between academically-successful and academically-challenged student athletes. This project study is the first research conducted at the university to focus on academic success of student athletes within the tenure of the current Athletic Director. There is no previous research to guide academic programs for student athlete success. Results of the project study will contribute to future academic interventions for student athletes.

Section 1 included the local problem, purpose of the project study, previous research regarding SRL, how it can be applied to academic achievement, and implications. Section 2 includes both the research methodology and design. The study population and data collection tool are explained in detail. The section concludes with limitations.

Section 2: The Methodology

The purpose of this quantitative study was to determine use of SRL skills among academically-challenged and academically-successful NCAA Division I athletes. Using an experimental and descriptive research methodology, The MSLQ was distributed, and data were collected for participating student athletes at the study university. A gamma correlation was used to evaluate research questions. A Pearson correlation was conducted to analyze intrascale data relationships.

Research Design and Approach

An experimental descriptive research design was selected to identify statistically different levels of SRL skills among participants. Descriptive research was used to study and observe behaviors without interfering with subjects. SRL and study skills may also be a method to enhance academic performance of higher education student athletes. The initial step to addressing needs of academically challenged student athletes was to measure their SRL skills. The second step was to compare these skills with student athletes who succeed in terms of their academic performance to determine any significant differences. I determined learning interventions that were needed to improve academic performance among the study population.

Setting and Sample

The population for the study was undergraduate student athletes. All student athletes who attended the study university and had completed 24 credit hours of collegiate studies were asked to participate in the study. The target population included male and female athletes in any of the following sports: football, basketball, baseball,

softball, volleyball, bowling, tennis, indoor track, or outdoor track. A nonprobability sampling strategy was used for the project study. Power analysis for an independent *t*-test was conducted using G*Power statistical software to determine sufficient sample size. I used an alpha of .05, power of .08, and medium effect size (f =.25), a sufficient sample is 101. At the time of data collection, over 200 student athletes at the study university had completed at least 24 hours of academic credits.

Instrumentation and Materials

The survey that was used to investigate SRL in the study population was the MSLQ. The MSLQ was developed in 1986 at the University of Michigan with the assistance of Paul Pintrich, Wilbert McKeachie, Elisabeth DeGroot, and Tereasa Garcia Duncan. The original self-assessment consisted of 58 questions to measure student self-efficacy, intrinsic value, test anxiety, self-regulation, and learning strategies regarding academic goals.

The current version of the survey includes 81 questions that are separated into two sections using a seven-point Likert Scale (see Appendix A). The first 31 questions are included in the motivational section, which involves assessing student goals, self-efficacy, and test anxiety. Next, the learning strategies section includes 50 questions about cognitive and metacognitive strategies as well as student management of resources. The test consists of 15 scales with six subscales involving motivational value components and nine scales for learning strategies. Value components of the MSLQ involve the purpose for which students engage in academic tasks. The 15 scales can be used singularly or as a modular unit (Pintrich et al., 2013). The complete survey is estimated to

take 20 to 30 minutes to complete. Roth et al. (2016) suggested that the MSLQ is the most vetted survey that is used in the empirical study of SRL. The reliability of an assessment is determined in terms of stability over time and internal consistency. Reliability using Cronbach's alpha is .52-.93. Measure of response bias does not account for number of variances in terms of scores and did not change data results. The MSLQ is currently open source with publishing rights granted to those who purchased the user manual and requires proper citation of assessment authors.

Data Collection and Analysis

Participants were informed of the study by the Assistant Athletic Director (ADA) in charge of Academic Advising via department-generated emails and during individual sports practice. The data collection period lasted 1 month. Participants were given time during their mandatory study hall to participate in the study. Students were also given a $5.00 Starbucks gift card as an incentive to complete the survey.

The MSLQ, via Microsoft Forms, was sent to each participant through the study university email server. A link to the survey was sent and accessed through their student emails, adding a layer of user authentication for consent forms. Selecting the link to the survey confirmed participants' consent to engage in the study. All responses were captured using Microsoft Forms and made available to me. Each question from the MSLQ was measured using a Likert scale that was summarized into scores for the 15 variable scales according to the user manual. Once each participant had a score for each scale, scores were transcribed to Statistical Package for the Social Sciences (SPSS) for statistical calculation. Data in the motivational section included insights regarding their

perceptions and beliefs about their ability to succeed in higher education outside of their athletic abilities. Information gleaned from the learning strategies section helped me define gaps in the study and learning skills. Results from the student resources sections were used to determine how participants used current academic support systems to improve academic performance.

The user manual provided detailed instructions on administering and scoring the MSLQ. Each module score was calculated by adding correlating responses from participants. Once scores were calculated, they were transcribed into SPSS for statistical evaluation. GPA was used to determine academic success. Students were separated into two groups: academically challenged participants (2.39 and below) were given a value of 1, and academically successful participants (2.4 and above) were given a value of 0. The Assistant Athletic Director evaluated participants' GPA and provided scores that were needed for data analysis. Independent t-tests were conducted to determine if there were significant differences in terms of motivational and learning strategy module scores between academically challenged and academically successful student-athletes.

Assumptions, Limitations, Scope, and Delimitations

Assumptions

There were three assumptions in this study. The first assumption was that participating student-athletes would complete the MSLQ truthfully and to the best of their knowledge. The second assumption was that there would be no foreseen changes in leadership that would prevent data collection during the timeline of the project study. The

third assumption was that the study university would remain active with its NCAA Division 1 accreditation.

Limitations

There are three significant limitations to this study. The first limitation was the population of underprepared student-athletes attending the study university. Different results from the survey may be present from student-athletes attending another NCAA Division 1 university serving a diverse demographic of students. The findings of this study may not be repeated in the general population of students. The study workshop/seminar developed from the results of the survey may only affect this population of student-athletes.

The second limitation of the study was the recruiting process of the student-athletes. Many of the student-athletes were strategically recruited to the study university for their abilities in athletic performance. The potential student-athletes only need to meet minimal academic standards established by the NCAA to be admitted to the study university. The students recruited who meet the minimum academic standards may have needed more scholarly aptitude to adhere to college-level academic expectations, therefore not achieving academic excellence while participating in collegiate sports.

I am an instructional faculty member of the study university in the Health, Physical Education, and Exercise Science department. The third limitation of the study was my relationship with the Athletic Department and the student-athletes. Many of the student-athletes may have been students in my classes. Being a familiar person at the university may cause the participants to not be honest in their answers to the MSLQ.

Scope

The scope of the study was to compare the self-regulating learning skills of academically achieving and academically challenged collegiate student-athletes to determine any statistical difference. Cumulative grade point average was used to determine and identify academically challenged student-athletes. Statistical analysis was used to determine potential significant differences between participants' modular scores of the MSLQ. Once the study and learning needs were evaluated, an SRLS improvement workshop/seminar was created to address the academically challenged athletes' identified learning and study needs.

Delimitations

The self-regulated learning skills of the particular population of student-athletes attending the study university were evaluated using the MSLQ. The literature review identified the MSLQ as the most documented survey to measure Zimmerman's self-regulated learning theory. Even with other demographic information collected from the participants, credit hours and grade point averages will be used to differentiate student-athletes.

Protection of Participants' Rights

Each participant was given a copy of their participant's rights and was asked to acknowledge that they understood their rights before initiating the MSLQ. The participant's bill of rights form was obtained from the Walden University Office of Research. An electronic consent form was attached to the Microsoft forms document and was administered before beginning the MSLQ. Each scored survey was secured in a

password-protected computer to increase the confidentiality of the study participants. The participants were only identified by a number given to them by the researcher. The researcher secured the only copy of the information linking the participant to their assigned number on the same password-protected computer for the required five years. There was no clinical data suggesting the questionnaire used in the study would cause mental or physical harm to the participant.

Data Analysis

A gamma correlation was used to evaluate the null hypothesis. Forty-eight student-athletes volunteered to participate in the study. Out of the 48 volunteers, 10 were at risk for academic ineligibility, and 38 were not at risk. Out of the twelve scales from the MSLQ with alpha over .68, two indicated a small and significant relationship between academic performance and self-regulated learning. The two scales were Control of Learning (M = 5.4, SD = .95), γ(.48), p =.03 and Critical Thinking (M = 4.89, SD = 1.21), γ (.42), p = .04). With two out of the fifteen scales indicating a significant relationship, there is not enough evidence to reject the null hypothesis.

A Pearson Correlation was conducted to determine if there were significant intra-scale relationships to guide the project study's model to improve academic performance among student-athletes.

Table 1

Correlation Among MSLQ Scales

MSLQ Scale	Correlation	*r*	*p*
Intrinsic Goal	Task Value	0.798	0.000
	Self-Efficacy	0.803	0.000
	Rehearsal	0.639	0.000
	Elaboration	0.789	0.000
	Critical Thinking	0.636	0.000
	Metacognitive	0.616	0.000
	Tests/Study Environment	0.286	0.049
	Peer Learning	0.402	0.005
Task Value	Self-Efficacy	0.865	0.000
	Rehearsal	0.788	0.000
	Elaboration	0.855	0.000
	Critical Thinking	0.683	0.000
	Metacognitive	0.735	0.000
	Time/Study Environment	0.378	0.008
	Peer Learning	0.498	0.000
	Rehearsal	0.337	0.019
Control Beliefs	Metacognitive	0.301	0.038
	Rehearsal	0.337	0.019
	Effort Regulation	0.551	0.000
Self-Efficacy	Rehearsal	0.65	0.000

	Elaboration	0.765	0.000
	Critical Thinking	0.576	0.000
	Metacognitive	0.645	0.000
	Time/Study Environment	0.365	0.011
	Peer Learning	0.407	0.004
Test Anxiety	Elaboration	-0.3	0.038
	Effort Regulation	0.295	0.042
Rehearsal	Elaboration	0.641	0.000
	Critical Thinking	0.674	0.000
	Metacognitive	0.65	0.000
	Time/Study Environment	0.321	0.026
	Effort Regulation	0.314	0.030
Elaboration	Critical Thinking	0.719	0.000
	Metacognitive	0.722	0.000
	Time/Study Environment	0.327	0.023
	Peer Learning	0.488	0.000
Critical Thinking	Metacognitive	0.789	0.000
	Effort Regulation	0.305	0.035
	Peer Learning	0.565	0.000
Metacognitive	Time/Study Environment	0.561	0.000
	Effort Regulation	0.392	0.006
	Peer Learning	0.372	0.009
Effort Regulation	Peer Learning	0.287	0.048

As indicated by the data results, as one scale improves, the correlating scales may also improve, causing a cascading effect of enhancing the self-regulated learning skills of the student-athletes. Each correlated scale was featured in the project study seminar/workshop plan to improve the practice of study and learning programs created to decrease the number of student-athletes at risk for academic eligibility.

Section 3: The Project

The Eastern University SEM 202 was developed from the results of this study with a holistic view of learners as both students and athletes. Results were used as a framework for the course. The seminar aims to provide opportunities for student athletes to assess and improve their use of SRL skills. The goal of the seminar is for students to use skills that are developed by participating in the seminar in order to enhance their academic performance while balancing athletic responsibility. The SEM 202 design was constructed to take advantage of significant interscale relationships between different subjects. Monda et al. (2015) indicated student athletes struggle with balancing dual roles. Research from study intervention programs for student athletes should lead to engaging learning concepts that assist with helping them balance athletic achievement and academic performance. With increased focus on assisting student-athletes with their academic success, programs with study improvement interventions that emphasize balancing the rigor of academics with athletics contribute to decision-making processes involving student-athletes regarding which Division 1 school to attend. Stokowski et al. (2017) indicated that study hall-only interventions negatively impacted student athletes' academic performance. Specific programs focused on improving study and learning skills within educational support departments may positively impact university NCAA APRs.

SEM 202 is an eight-module seminar that can be deployed during a 7-week term or 15-week semester, as well as self-paced at the study university. It is intended to be an asynchronous online seminar/workshop. Using a digital asynchronous learning environment will provide student athletes with the opportunity to engage with learning

content while balancing time for both academic study and athletic responsibilities. Seminar facilitators are responsible for guiding the progress and pace of programs within the learning management system. Each module will focus on a different scale from the MSLQ. Module learning outcomes will scaffold seminar learning outcomes. Each module has intended learning outcomes, instructional materials, and assessments. Each module learning outcomes assessment includes project assignments to assist the learner in creating personal study material using applications, peer learning discussion forums, and reflective journals. Fung et al. (2019) indicated that SRL skills do not improve independently or with age. Skills need to be taught and practically applied to improve learning.

Module one introduces the seminar's purpose and evaluates participants' student-athlete identities. They are asked to complete a survey explaining their dual identities as college students and athletes. Balancing both sides of their identity is essential to their academic success (Hextrum, 2020). Assessments for module one include the athletic identity survey, a discussion of survey results, and a reflection on personal use of SRL skills. Module two focuses on intrinsic motivators for academic performance. Bin Abdulrahman et al. (2021) found students employ various study skills, including time management, reducing environmental distractions, goal setting, peer-learning engagement, and rehearsals of questions from previous tests to contribute to their academic success. They also used multiple sources of technology and personal intrinsic motivation to achieve their dreams of being medical physicians. Their study skills and motivation contributed to their academic success. Assessments for module two include

the VARK learning survey, a discussion on intrinsic motivators, and a reflection on personal learning styles. Module three requires them to assess their self-efficacy regarding college academic success. Hayat et al. (2020) indicated a positive relationship between academic achievement and metacognitive learning strategies. Assessments for module three include the Academic Self-Efficacy and Efficacy for Self-Regulation survey, reflecting on results of the study, and discussing developing SMART goals to improve self-efficacy for academic performance. Module four requires them to evaluate how they personally value their educational endeavors. Task value is a component of SRL and has a positive correlation with other attributes of SRL. Assessments for module 4 include a vocational survey, reflection on the value of higher education, and discussion of how their academic major aligns with their post-college career goals. Module five includes an environment for learners to assess and improve their critical thinking skills. Critical thinking skills are essential for academic progress toward a degree (Rusmansyah et al., 2020). Assessments for module five include a concept map to practice critical thinking and discussion of attributes to master critical thinking. Module six involves addressing methods of improving control of the learning environment. Assessments include evaluation of current study habits and practice with developing study materials using free online educational applications. Module seven requires reflection on assessment performance and the use of rehearsal of learned concepts as a study method. Assessments for module seven include practicing note taking and reflection on testing using rehearsal strategies for information retention. Module eight requires learners to evaluate their time management skills for balancing academic excellence and athletic

responsibilities. Sainz et al. (2019) suggested university curriculums include interventions to assist learners with time management skills. Assessments for module eight include evaluating performance on previous tests and personal digital calendar practice.

Rationale

Mastering SRL skills is essential for university success and the autonomous nature of academia. All college students, especially student athletes, benefit from the opportunity to improve their study and learning skills. SRL skills do not improve independently but must be taught and used in a learning environment for measured improvement of study skills (Bin Abdulrahman et al., 2021). Students are not born with these skills but with the potential to develop them. Improving SRL skills may also lead to increased problem-solving and critical-thinking skills (Hwang & Oh, 2021). Programs using SRL emphasize the learner's active role in their cognitive development and learning processes (Peel, 2020). With the potential improvement of academic performance of student athletes due to seminar participation, university retention, graduation rates, and athletic APRs may also improve. Prompting students to develop their SRL skills leads to sustained lifelong learning and skills in order to transition from school environments to the global marketplace (Taranto & Buchanan, 2020).

Review of Literature

Academic Performance Programs for Student Athletes

Interventions to improve learning motivation and balance student/athlete identity are a current research focus for supporting student-athletes academic performance

(Garcia et al., 2023). The potential correlation of factors such as motivation, identity, and self-regulation with academic achievement has been studied among college student-athletes (Garcia et al., 2023). Yukhymenko-Lescroart and Ariya (2022) conducted a meta-analysis of 73 studies with 79 samples of US collegiate athletes. The analysis results indicated a positive correlation between academic identity, academic motivation, role negotiation, and self-regulation. Additional research found that student-athletes lean more toward their identity as athletes and focus less on their identity as academically achieving students (Yukhymenko-Lescroart & Ariya, 2022). For student-athletes to achieve academic success, they must be able to balance their dual identities. A different cohort of student-athletes surveyed also indicated that they struggle to balance the dual roles of students and athletes. Monda et al. (2015) aimed to determine the factors leading to academic success among student-athletes. The research results indicated that items correlated with academic success were academic preparation, motivation, and active learning engagement (Monda et al., 2015). These items can be a foundation for a program to assist student-athletes in balancing their academic and athletic responsibilities.

One of the academic performance programs at Eastern State University is a mandatory study hall. Research in educational intervention for student-athletes indicated that study hall interventions negatively impacted student-athletes' academic performance (Stokowski et al., 2020). Specific programs focusing on improving study and learning skills within academic services support departments may positively impact NCAA academic progress rates. Study intervention programs for student-athletes should engage in learning concepts that assist with helping them balance athletic achievement and

academic performance (Hextrum, 2020). O'Neil et al. (2021) suggest future research include exploring the role negotiation of being both a student and an athlete, emphasizing balancing those paradigms instead of the potential conflict. Providing a space for athletes to explore and learn self-regulated learning skills would assist with balancing the demands of academics and athletics (O'Neil et al., 2021).

SRL Skills as Academic Interventions in Higher Education

Concepts of self-regulated learning could successfully improve academic performance and autonomous learning in higher education student populations (Khan et al., 2020). One of the studies on SRL examined using self-regulated learning skills development as a component of undergraduate higher education curriculums. Balen-Babyigitt and Geven (2020) interviewed 1,428 college students using the self-regulated learning scale and a semi-structured interview form. Results of the research indicated undergraduate students moderately used SRL skills depending on their exposure to the construct in their secondary education. Student-athletes would benefit from becoming more independent and autonomous in their learning. Students are exposed to various degrees of SRL in their secondary and college learning environments. Khan et al. (2020) surveyed 480 university students to determine their use of SRL and its effect on their academic achievement. Results of the study indicated that the learners believed that SRL behavior contributed highly to their academic success. Student-athletes would also benefit from learning self-regulated learning skills to improve their academic achievements.

A four-week seminar-style accelerated program with themes intended to help the learner develop SRL and study skills was designed for university students (Barth, 2020). Themes included using context-based reading centered on each lesson's key points, self-grading formative assessments, discussion prompts to engage students in peer learning strategies, and video feedback for graded summative evaluations. At the end of the course, students were given a survey that indicated they had a positive learning experience and used the learning and study skills gained in other online classes. Student-athletes may also benefit and have a positive learning experience from a study and learning program focused on improving self-regulated learning (Van Lankyerd et al., 2019).

SRL Intervention Programs in First-Year Populations

An SRL learning intervention was part of a freshman first-year experience course (FYC) at Molloy College. Gabbia et al. (2019) observed learners using various self-regulated learning skills at their study university. A sample of 185 learners was provided with the MSLQ and the Kobl Learning Skills Inventory to measure the participants' use of SRL pre- and post-intervention. After completing the FYC, post-intervention scores indicated a significant difference in self-regulated learning scores. To improve the retention rates of online learning classes, additional university faculty created a first-year experience seminar that focused on improving learner SRL skills, self-determination, and self-efficacy (Stephen & Rockenson-Szapkiw, 2021). Ninety-five students volunteered to participate and were separated into two sections of the Freshman Success Seminar (FSS). The outcomes of the intervention course included enhancing different aspects of SRL,

including time management, critical thinking, study habits, information literacy, and the use of educational technology. Post-intervention scores indicated a significant difference between the traditional FSS and the FSS intervention groups. Many universities offer a first-semester course introducing new college students to university academia. Student-athletes may experience the same with a study and learning program featuring self-regulated learning skills.

SRL Program Inventions for Medical Students

Self-regulated learning and study skills may have led to positive academic achievement in populations of medical students from the Middle East. Bin Abdulrahman et al. (2021) observed a cohort of 675 students from six different medical schools in Saudi Arabia. They found that students employed various self-regulating learning and study skills, including time management, lowering environmental distractions, goal setting, peer-learning engagement, and rehearsals of questions from previous tests. The use of a longitudinal learning workshop featuring SRL, self-determination, and self-care was studied with a different group of undergraduate medical students. The medical students participated in a seven-week program that featured reflections and training in the physical, mental, SRL, and psychological dimensions of learning. At the end of the program, students were asked to evaluate their experience with the seven-week program. Evaluations stated that the learners believed the experience with the SRL program assisted their learning and supported their academic achievement (Thye & Tauschel, 2021).

Research faculty at Tehran University examined SRL study skills and the potential use of a learning diary to improve academic performance in low-achieving medical students. A group of medical students from one course were selected for the intervention program and trained in using SRL skills while keeping a diary of their learning journey (Hajiabadi et al., 2023). There was also a control group of students from the course that needed to be trained. Pretest and post-test results determined that both SRL inventory scores and course grade point average were significantly higher than in the control group. There was no significant difference in overall GPA between the intervention and control groups. The researchers determined that training the low-achieving medical students in SRL skills contributed to their improved course grades. With the increased focus by the NCAA on student-athletes and their academic success, study/learning interventions using self-regulated learning skills could assist learners with balancing the rigor of academics with the demands of athletics (NCAA, 2023).

Learning and Study Intervention Program Components

Learning program components such as time management, metacognition, electronic journaling, and note-taking skills could benefit student-athlete populations and assist with balancing student and athletic college life (Hayat et al., 2020). Time management is a primary component of self-regulated learning. Students must be taught time management skills to succeed academically. Researchers focused their study on self-regulated learning skills that transcend college and would serve learners in professional employment (Sainz et al., 2019). They studied the time-management skills of a cohort of economic and business students used in their college studies. The results of their research

indicated that students needed to possess the skills for self-organization and prioritization of activities for academic success. A different cohort of 275 students volunteered to answer questions regarding their academic opinions related to their academic performance. The study's results indicated a positive relationship between academic achievement and metacognitive learning strategies, a component of self-regulated learning (Hayat et al., 2020). Improving time management skills and metacognition awareness could benefit student-athletes' academic achievements.

Many college students begin higher education without the tools to organize and execute autonomous learning (Thibodeaux et al., 2017). College admittance may provide the opportunity to learn but not the framework for monitoring their academic performance. Fung et al. (2019) developed a research course to examine using electronic journals to enhance learners' self-regulated learning skills. Two classes of 65 learners were allowed to participate in the research course. The experimental group was provided with lessons aimed at improving self-regulated learning. The lessons prompted the students to evaluate their study and learning habits using electronic journals. They also learned how to use SRL skills in their current study area. At the end of the study term, the experimental group demonstrated gains in metacognition, attitudinal scores, process analysis, and higher trends of self-efficacy in their learning assessments. Implementation of the results included using electronic journals to improve SRL skills in Higher Education populations (Thye & Tauschel, 2021). Self-regulated learning skills are essential for academic success. The skills can also be used as a strategy for academic interventions for low academic achieving student-athletes.

Using SRL skills as a component of a collaborative note-taking assignment in an online learning environment has also been investigated. Researchers suggested the need for pre-service teachers to develop their SRL skills while encouraging those skills with their learners. Welcho and Na-Songkhla (2021) studied 147 pre-service teachers using SRL to evaluate their assessment of a classroom experience. Results of the study found self-reflection and self-evaluation components of SRL as partial mediators for the collaboration between the pre-service teachers' note-taking evaluation of their classroom experience. The teachers could develop their SRL skills while encouraging skills in their fellow program colleagues (Li et al., 2018). Teaching student-athletes how to manage SRL and study skills could improve their learning capabilities both face-to-face and while traveling during sports seasons. SRL skills could assist student-athletes in remaining diligent and current in their academic pursuits.

SRL Events in Virtual Environments

Literature supports using Self-Regulated Learning as a paradigm for programs designed to improve academic performance among college students in both face-to-face and virtual learning environments (Haiabadi et al., 2023). A program that enhances study and learning must be delivered online to best serve a busy student-athlete population. Self-regulated learning skills can be enhanced through a virtual flipped classroom environment to improve academic achievement (Uz & Uzan, 2018). A sample of 60 university students was placed in either the experimental or control group. SRL was measured in both groups before the start of the course, and at the end of class, grades were used to determine academic achievement. The data collected indicated no

significant difference in SRL between the two groups of students before the start of the course. However, data collected after the course completion showed a substantial difference in SRL and academic achievement in favor of the experimental group. Students completing the course using a virtual flipped classroom with Mash-up content scored higher in post-course SRL and acquired a better end-of-course grade than students in the same class using the traditional method of instruction (El-Senousy & Alquda, 2017). Applications for the study results suggest a course developed to improve SRL and study skills for student-athletes should include mash-up video technologies and active learning in a flipped classroom format.

Gamification is being studied to increase active learning in all learning environments. Murillo-Zamarano et al. (2021) studied gamification to engage SRL with active learning in higher education students. They aimed to match digital workplace concepts with a digital focus in academia. They employed digital platforms such as Google Education, YouTube, Kahoot, and other blended learning applications for active learning engagement. The media are used in flipped classroom educational settings to increase the recall of learned content. Their study found increased content engagement by the learners using digital platforms and gamification applications without the loss of information learned. Assessments of the educational content indicated more interest in information engaged using a digital platform. Gamification is a trusted method to increase study and active learning in digital education environments (Vaz de Carvalho & Coelho, 2022). Providing a study and learning program that is delivered virtually would

give the student-athletes more options to engage in the intervention between classes and athletic obligations.

Project Description

I used Zimmerman's theoretical framework and the data collection results from the study university to design the study seminar. Results indicated a strong relationship between eight different scales of the MSLQ, which measure learner SRL skills. Each module is dedicated to a different interrelated scale. The seminar/workshop has eight modules. The seminar can be facilitated by an instructor or self-paced for the learner. Each module's learning activities and lessons can be facilitated in one week or two. The flexibility of the seminar design leads to the content being taught during both full-term and mini-term semesters at the study university. The modules are organized with the same formula for learner convenience and continuity. Each module contains an overview, instructional materials, a learning reflection, a study assessment, and a module summary.

Implementation Plan and Timeline

The project seminar was presented to the athletic director and assistant athletic director in charge of athletic academics. They have the authority to approve the use of the project seminar as an intervention tool for academically challenged student athletes. Once the Athletic Director approves the intervention, I can create the seminar using the university's Learning Management System. Student-athletes can be added to the workshop by the academic advisors as needed.

Roles and Responsibilities of Students and Others

The only responsibility of the students is to take the opportunity to complete the activities in the study and learning seminar. I suggest utilizing the academic advisors in athletic and academic support to facilitate the seminar. I will train each advisor on the elements of using the Learning Management System and the seminar design and execution.

Project Evaluation

There are three levels of project evaluation for SEM 202. The first level is the pre-and post-application of the Motivated Strategies for Learning Questionnaire or MSLQ. During the first and last week of the seminar, participants are asked to complete the survey. The MSLQ was developed in 1986 at the University of Michigan with the assistance of a federal education grant by a group of researchers, including Paul Pintrich, Wilbert McKeachie, Elisabeth DeGroot, and Tereasa Garcia Duncan (Pintrich & Groot, 1990). The questionnaire was developed using a social cognitive view of learning strategies with the student as an active information processor. The original self-assessment consisted of 58 questions to measure student self-efficacy, intrinsic value, test anxiety, self-regulation, and learning strategies toward an academic goal. In the five years of funding, over 2,000 correlation field studies were conducted to refine the general model of college student motivation and self-regulation. (Duncan & McKeachie, 2005). The test consists of fifteen scales with six subscales of motivational value components and nine scales for learning strategies. The value components focus on the purpose for which students engage in academic tasks. The 15 scales can be used

singularly or as a modular unit (Pintrich et al., 1991). Roth et al. (2016) investigated various methods of studying SRL in multiple populations. Their investigation suggested that the MSLQ is the most vetted survey used in the empirical study of self-regulated learning. A quantitative measure of success for the seminar course would be significant increases in participants' scores on the MSLQ.

A favorable end-of-course evaluation of the seminar used by the university for all courses would be the second measure of success. Participants will be asked general questions about the value of the learning experience and suggestions for course improvement. Even if there are no significant changes between pre- and post-data collected from the MSLQ, a quality and valued learning experience for the participants is a positive result.

The third level of evaluation is within the project seminar modular organization. The seminar has four intended learner outcomes that are scaffolded by the modular learning outcomes. Assignment deliverables are designed to assess the level at which each modular learning outcome is achieved. Each modular assessment must be performed with a degree of 75% or higher to qualify the learning outcome. The 75% degree aligned with the university assessment policy that governs the seminar programs.

The overarching goal of the seminar course is for student-athletes to engage in self-regulated learning skills to improve their academic performance. Many student-athletes are first-generation college students and may not have been able to sharpen their SRLS in secondary education environments. Improved academic performance can lead to improved retention and graduation rates for the university. Once student-athletes have

graduated from college, they can use their SRLS to excel in the workplace and professional sports. Providing the student-athletic population with an opportunity to develop their SRLS will benefit them far past their university experience. Self-regulated learning skills are lifelong tools that can transform athletes from students to component global leaders. Producing components and capable adults is the goal of stakeholders in higher education. Critical stakeholders in the academic success of the student-athlete population are the leaders in the Office of the President, the Office of the Provost, the Athletic Department, the parents/guardians of the athletes, and the entire student-athlete population. Improving overall academic performance can enhance the Academic Progress Rate (APR). Increased funding opportunities are available to athletic programs with high APR provided by the NCAA. The key stakeholders also welcome additional funding for any university program.

Section 4: Reflections and Conclusions

Project Strength and Limitations

This study involved addressing improving intervention programs for student-athlete populations that may increase the number of academically successful student-athletes at Eastern State University. Limitations of the project study involve my inability to control the research environment, potential improper representation of the target population, and deficit of volunteer study participants.

Strengths of the Project Study

There is an abundance of literature that has investigated the academic needs of higher education students. However, only some directly addressed the educational performance intervention needs of academically challenged student-athletes. The research gap led to the project study's development involving self-regulated study and learning skills of at-risk student athletes. This study directly addressed the current SRL skills of the study population. With the insight gained from this study, effective interventions can be produced with knowledge of current self-regulatory behaviors.

A second strength of the project study involved participants' awareness of their personal use of SRL and study skills. A small cohort of student athletes participated in the project study and completed the MSLQ. They were asked questions about their study and learning behaviors. While conducting assessments, participants had to contemplate if they had the self-efficacy to complete their degree program, whether they sought help with a complex subject matter, and how they practiced time management. By going through the process of completing the MSLQ assessment, participants were evaluated on

their personal study and learning skills. They can use their awareness to build new or modify current study and learning behaviors.

The third strength of the project study involved use of the MSLQ. The MSLQ is one of the most reliable and versatile surveys that is used to study SRL skills. Roth et al. (2016) suggested the MSLQ is the most vetted survey in the empirical study of SRL. It was used to address significant differences between individual survey scales involving two sets of student athletes.

Limitations of the Project Study

One of the limitations of the project study involved control of the research environment. There was a plethora of variables that could contribute to poor academic performance. There was no means to control environmental conditions and variables that led to the study and learning skills developed by student athletes. Variables such as exposure to study skills that are developed in secondary education, cultural influences on higher education, social expectations of student athletics, family responsibilities, previous experience with learning tools, and personal value of education can affect academic excellence as well as study and learning habits.

A second limitation involved the number of participants who volunteered for the study. Out of 273 registered student athletes, only 48 volunteered for the study. The small data set lowers the reliability of the data. Results may not be replicated in different universities. A possible cause for lack of participation of volunteers was that data collection was conducted during the summer semester of 2021, which was during the COVID-19 remote learning period.

A third limitation resulting from low volunteer participation involves the potential for improper representation of the target population. Only 10 of the 48 participating student-athletes were identified as academically at risk. Data from these 10 participants may not represent SRL skills used by the larger population of academically at-risk student athletes at the study university.

Scholarship, Project Development, and Leadership Change

There is a need for additional teaching resources to support academic achievement of student athletes, participation in educational research, and progressive thinking among traditional academic stakeholders.

Program Development

During preliminary development of the project study, an investigation was conducted on current programs and systems to support academic achievement of NCAA student athletes. I was provided information about the athletic department budget at the study university. Grant funding was available to purchase hardware and software to support academic interventions for student-athletes. It is the responsibility of the academic advising team to create, develop, and implement programs to assist in the academic performance of student athletes. During meetings with the assistant athletic director in charge of academics, she shared her concern that none of the current athletic academic advisors had yet obtained degrees or professional training involving educational programs. I was unaware that the advisory team lacked an education program design and implementation expert. It was assumed that academic advisors had degrees in education as well as employment history. That was not the case at the study university.

The program project created as part of the capstone study was encouraged by leadership in the Department of Athletics to fill the gap in knowledge exhibited among current athletic department personnel.

Another lesson learned was the need to inspire and incentivize participation in education research to improve the community of scholarship. It is challenging to develop effective programs for a specific group of students without the cooperation of the members of the population targeted. It was more challenging to recruit volunteers for the study than first perceived. At the time of data collection for the project study, there were 273 registered student-athletes at the study university. Out of the available pool of students, 20% chose to participate in the study. It was advertised and discussed among the athletic population the importance of establishing a program that would directly impact athletes' learning habits. In this research study, data collection was conducted during the summer semester with a population of student-athletes residing on the study university's campus.

The third lesson learned during the research and development of the project study was the lack of mindfulness to change established academic paradigms on the need for additional student support. Even with the help of the Athletic Director, it won't be easy to convince university stakeholders to add the project program, SEM 202, for academic credit only to benefit the student-athletes. One of the goals of adding SEM 202 to the program curriculum for student-athletes is to create learning communities among athletes according to sports participation. Social connectivity, fellowship, and trust are established during sports practice, travel, and competition. Adding an educational element to an

already established group would prove beneficial, creating a more robust learning community. After initial conversations with the Associate Director of Student Pathways governing all the university seminar courses, it was encouraged to offer the program as a study and learning guide to all undergraduate university students. The Associate Director believes that offering a course for academic credit to affect one student population would not benefit the university. I assumed that the academic engagement faculty would welcome any education program that would improve the academic performance of any student among university stakeholders. It has been recommended to pilot the program with the student-athletic population and to determine if it produces significant changes in academic performance before approaching the Office of Academic Engagement Pathways to vet the course for academic credit. Even with research supporting the need for programs that address the unique needs of the student-athlete population, the program must be packed and presented to affect the entire university academic community. The wheels of educational change could be faster to progress.

Leadership Change

During the project research and development process, I gained more respect for academic leaders conducting research and attempting to effect change for the benefit of the learning community. There was an awareness of the scholarly research process gleaned through the educational experiences in a doctoral program. However, experiencing the protocols to conduct research during a pandemic taught me valuable lessons. The primary lesson was patience in the initial investment needed in the research process. As a study university adjunct faculty member, my academic department chair

had to grant permission before conducting research. A meeting had to be undertaken with the Athletic Director and Assistant Athletic Director to discuss the purpose of the research study and the potential product of the research being conducted. As a doctoral student at Walden University, an IRB from both universities had to be submitted and approved before data collection for the research study. The meetings to gain permission to conduct research and approval processes were required to be completed virtually due to the social distance policies of the study university during the remote learning shift due to Covid 19. Consistent communications were sent to expedite the process and to remain within a specific time frame according to the academic calendar for Walden University. With full knowledge that protecting the privacy and rights of student volunteers is paramount, the time frame from gaining permission to conduct research from the study university to getting approval to conduct research from the IRB at Walden University was six months. I was disenchanted with the reality that the preliminary work leading up to the data collection would be such a lengthy time frame. During my next research project, I will better understand the initial time investment needed before conducting the research.

I learned about the extensive network of university committees, administrators, and boards of directors that are part of the vetting process to modify or change academic programs. I have increased my knowledge of the tasks that need to add a course and establish a program curriculum. The study and learning improvement program within the Athletic Department can only be recommended to academically at-risk students, and it is not required. For the program to be required, a new university policy would have to be

created stating that the course would have to be completed as a part of the intervention strategy to assist at-risk student athletics. Academic leadership must draft, format, and sponsor All new university policies. Once the policy is written and properly formatted, it has to be approved by the Office of Academic Engagement and Pathways, Office of the Provost, and Office of the President before it can be presented to the Board of Visitors. Several time-consuming meetings with the leaders of each office accompany all vetting tasks. If the program is to become a part of a systematic change to address study and learning skills to improve the academic performance of all student-athletes, it would need to be added to the university seminar course allotment.

The program would be submitted to the curriculum committee for approval and converted to an official university online course. A letter indicating the program curriculum change would be sent to the State Department of Education governing Higher Education. Even with the approval of the university and state agencies, students may not take advantage of the opportunity to develop improved study and learning skills to enhance their academic performance.

By explaining the processes that affect the establishment of new programs and classes, I understand why the process for change at the study university is lagging. A faculty member can invest hours creating a viable course for it not to be used in an academic program. The most profound respect is granted to those who have persisted through the process and created educational improvement and policy changes at the university.

Reflection on the Importance of the Work

The pinnacle purpose of capstone work was to assist adult learners with developing lifelong study and learning skills that would serve them well in both the college classroom and the professional workplace. I was a student-athletic and experienced the difficulty of balancing academic performance with athletic excellence and failed. I have been teaching higher education classes since 2005. I have taught at traditional four-year universities, junior colleges, and corporate settings and encountered both traditional and non-traditional learners. During my program's residency courses, I was asked to analyze my capstone project's various learning theories and potential subjects. At the same time, I was teaching an online class with many student-athletes at risk of failing the course. A grade intervention investigation was completed on the failing students. It was discovered that they were on the same sports team, in-season, and currently on a travel series of away-from-campus games. The Assistant Director of Athletics in charge of academics is a colleague and sought assistance with ideas to improve student-athletes' academic performance at the study university.

The low APR score, in combination with the number of student-athletes failing out of the study university, was alarming and unacceptable. Scholars prioritize learning and the collegiate learning experience instead of extracurricular activities. Student-athletes usually have a dual priority of succeeding in their sport and obtaining a college education. The study university is a Historically Black College or University (HBCU) aiming to educate the underserved and underrepresented in our society. The university enrolls a large percentage of first-generation and socioeconomically challenged college

students. Those two types of students may not have been able to develop the study and learning skills needed to pursue higher education while participating in NCAA D1 college sports. Many student-athletes at the study university fall into both first-generation and socioeconomically challenged categories but use their athletic abilities to access higher education. While researching the academic support needs of student-athletes, unethical advising strategies were discovered. Some published articles suggest that student-athletes be placed in specific academic programs that guarantee passing grades without developing marketable employment skills. The notion of pushing athletes through academic programs to preserve their NCAA competitive grade point average is also unacceptable. It is the goal of many NCAA D1 students to transition to professional sports. If they are not recruited to a professional team, they should be just as prepared to succeed in the workplace. These students must gain and develop self-regulating study and learning skills to succeed in university studies and the global economy. They can grow and pass these lifelong learning skills to the next generation of student-athletes. My personal experience and professional challenge is to prepare college athletes to prosper in their academic excellence and sports performance.

Implications, Applications, and Directions for Future Research

There are several potential impacts for social change implications by addressing the academic performance needs of student-athletes for the individual athlete, their family, and the university community. When changes in social structure, social values, cultural norms, attitudes, and traditions, there is social change. One of the primary factors that influence social change is education. Education provides knowledge that increases a

person's rationality, judgment, and ability to contribute to society. With the more formally educated people we have in a population of citizens, there is a more significant potential for those individuals to become cognizant of the community's needs and engage in addressing them. By addressing the academic performance needs of students, their potential success in their educational pursuits is also impacted. Two directions for future research would be to partner with academic programs to increase the number of study participants and to conduct qualitative research instead of quantitative research.

Social Change

Individual student-athletes will be able to participate in the learning and study skills program that could improve their academic performance. Improved academic performance can lead to success in their education degree programs. Students completing their degree program will increase the number of college-educated individuals who can address social issues. Gaining self-regulated learning skills gives learners a life-long skill set that can be used in multiple areas of life. After graduation, student-athletes can use their SRLS to gain and retain employment, contributing to the global economy. By improving their academic performance, completing their degree program, and retaining employment, the student-athlete would provide evidence addressing the attitude and assumptions that student-athletes can also be student-scholars.

For the families of the student-athletes, there is a potential to change their family's socioeconomic status. A large percentage of student-athletes attending the study university are first-generation college students. By attending college, the social-cultural forms of their families are shifted. They will also have a greater chance of increasing

their family income with the potential of higher-wage employment using their college degree.

For the university, improving the academic performance of student-athletes would improve university retention and graduation rates. Improved academic statistics can lead to increased funding for the study university. The points calculating the NCAA academic progress rate (APR) are for student-athletes receiving financial aid staying in school and for the student-athletes remaining academically eligible for competition. With a higher APR rate, there is more potential for funding from the NCAA for academic excellence. HBCUs are among the colleges and universities with the lowest APR scores. By improving the APR for the study university, there is a potential for increasing the economic mobility of the entire university athletic program.

Direction for Future Research

A suggestion for future research would be to partner with the academic areas with the most significant number of student-athletes to narrow the engagement scope for a more focused study participation campaign. The current project study contacted all student-athletes for potential participation. A more concentrated campaign could elicit a better response. Another method to improve the number of participants for future research would be to collect data during a traditional academic semester. Data collection for the project study was collected during the summer months between the fall and spring academic semesters. The study university hosts student-athletes during the summer for pre-season camps and transitional programs for first-year student-athletes. There was no

way to determine the availability of the student-athlete population to participate in the study outside of the academic semesters.

A potential direction for studying the improvement of programs for academic performance among student-athletes would be to conduct qualitative studies instead of quantitative research. The current project study used quantitative methodology to determine the relationship between academic performance using self-regulated learning skills. A qualitative approach would provide the researcher with a student-athlete understanding of the concept of SRLS, their opinions, and their possible experiences using study and learning skills. This type of research may provide a different insight into the problem and potential interventions for improving student-athletes study and learning skills intervention programs.

Conclusion

In closing, researching academic programs to increase student-athlete's academic performance using self-regulated learning skills proved more difficult than first presumed. Factors beyond academia, including time commitment to sports competition, social issues, financial issues, and general stress, contribute to student-athlete's academic performance. Zimmerman’s theory of self-regulated learning was used to examine if there was a relationship between SRLS and student-athlete academic performance. Data collected from a small population of student-athletes from a local HBCU indicated no statistically significant relationship between academic performance and SRLS as measured by the MSLQ. However, the data also demonstrated a significant relationship between the eight scales of the MSLQ and academic performance. The significant scales

were intrinsic motivation, self-efficacy, task value, critical thinking, control of learning, rehearsal, self-reflection, and time management. The eight scales were the foundation for the content for the Seminar 202 study and learning program dedicated to improving at-risk student-athletes' study and learning skills. The eight-module program allows students to learn and gain experience using self-regulating learning skills. I genuinely believe that if students used the information gleaned from full participation in the seminar program, they would have gained study and learning tools to improve their academic performance. Improved study and learning skills with the potential to increase student-athletes academic performance and provide positive social change is the “goal line” of the project study.

References

Antoneli J., Jones S., Burridgem A., & Hawkings, J. (2020). Understanding the self-regulated learning characteristics of first-generation college students. *Journal of College and Student Development, 61*(1), 67-82. https://doi.org/10.1353/csd.2020.0004

Baldan Babayigit, B. & Guven, M. (2020). Self-regulated learning skills of undergraduate students and the role of higher education in promoting self-regulation. *Eurasian Journal of Educational Research, 89*, 47-70. https://doi.org/10.14689/ejer.2020.89.3

Barros, A., & Veiga-Simao, A.M. (2016). Attributes in academic achievements in the transition to higher education. *Current Psychology, 37*(1). https://doi.org/10.1007/s12144-016-9505-4

Barth, D. (2020). Seven ways of engaging the online learner to develop self-regulating learning skills. *Journal of Teaching and Learning with Technology, 9*(1), 19-29. https://doi.org/10.14434/jotlt.v9i1.29165

Ben-Eliyahu, A. & Linnenbrink-Garcia, L. (2015). Integrating the regulation of affect, behavior, and cognition into self-regulated learning paradigms among secondary and post-secondary students. *Metacognition and Learning*, *10*(1), 15-42. http://doi.org/10.1007/s11409-014-9129-8

Bin Abdulraham, K., Khalarf, A., Bin Abbas, F. & Alanazi, O. (2021). Study habits of highly effective medical students. *Advances in Medical Education and Practice, 12*, 627-633. https://doi.org/10.2147/AMEP.S309535

Bol, L., Campbell, K. D., Perez, T., & Yen, C. J. (2016). The effects of self-regulated learning training on community college students' metacognition and achievement in developmental math courses. *Community College Journal of Research and Practice, 40*(6), 480-495. https://doi.org/10.1080/10668926.2015.1068718

Braakhuis, A., Williams, T., Fusci, E., Hueglin, S., & Popple, A. (2015). A comparison between learning style preferences, gender, sport, and achievement in elite sports athletes. *Sports, 3*(4), 325-334. http://doi.org/10.3390/sports3040325%20

Case, R., Dey, T., Barry, A., & Rudolph, W. (2017). An examination of the nature and scope of academic clustering in college athletic programs. *Journal of Contemporary Athletics*, *11*(1), 47–57. http://ezp.waldenulibrary.org/login?url=https://search-proquest-com.ezp.waldenulibrary.org/docview/1929726388?accountid=1487

Cetin, B. (2015). Academic motivation and self-regulated learning in predicting academic achievement in college. *Journal of International Education Research, 11*(2), 95-106. https://doi.org/10.19030/jier.v11i2.9190

Cleary, T., Zimmerman, B., & Keating, T. (2006). Training physical education students to self-regulate during basketball free throw practice. *Research Quarterly for Exercise and Sport, 77*(2), 251-262. https://doi.org/10.1080/02701367.2006.10599358

Cleary, T. & Zimmerman, B. (2001). Self-regulation differences during athletic practice by experts, non-experts, and novices. *Journal of Applied Sport Psychology, 13*(2),

185-206. https://doi.org/10.1080/104132001753149883

Comeaux, E. (2015). Innovative research into practice in support centers for college athletes: implications for the academic progress rate initiative. *Journal of College Student Development*, *56*(4), 274-279. https://doi.org/10.1353/csd.2015.0029

David, H. (2015). Between a ball and a harsh place: A study of black male community college student-athletes and academic progress. *Community College Review*, *44*(3), 287-305. https://doi.org/10.1177/0091552115578168

De Corte, E. (2016). Improving higher education students' learning proficiency by fostering their self-regulation skills. *European Review*, *24*(2), 264–276. https://doi.org/10.1017/s1062798715000617

DiBenedetto, M. & Zimmerman, B. (2010). Differences in self-regulatory processes among students studying Science: A microanalytic investigation. *The International Journal of Education and Psychological Assessment, 5,* 2-24. http://ijepr.org/

Dincol-Ozgur, S. (2018). Effect of learning styles on prospective teachers' self-regulated learning skills. *Cypriot Journal of Educational Science*, *13*(4), 521- 528. https://doi.org/10.18844/cjes.v13i4.3185

El-Senousy, H. & Alquda, J. (2017). The effect of flipped classroom strategy using Blackboard mash-up tools in enhancing achievement and self–regulated learning skills of university students. *World Journal on Educational Technology: Current Issues*, *9*(3), 144-157. https://doi.org/10.18844/wjet.v6i3.1974

Ergen, B., & Kanadli, S. (2017). The effects of self-regulated learning strategies on

academic achievement: A meta-analysis study. *Eurasian Journal of Education Research, 17*(69), 55-74. https://doi.org/10.14689/ejer.2017.69.4

Ernst, J., & Clark, A. (2014). Self-regulated learning of at-risk engineering design graphics students. *Journal of Engineering Technology*, *31*(2), 26–31. Retrieved from http://ezp.waldenulibrary.org/login?url=https://search-proquest-com.ezp.waldenulibrary.org/docview/1770928905?accountid=14872

Fung, C., Addulah, M., Lee, L. & Hashim, S. (2019). Improving self-regulated learning through personalized weekly e-learning Journals: A time series quasi-experimental study. *The e-Journal of Business Education & Scholarship of Teaching,* 13(1), 30-45. https://www.proquest.com/scholarly-journals/improving-self-regulated-learning-through/docview/2261002664/se-2?accountid=14872

Garcia, A.J., Fong, C.J., Regalado, Y.M. (2023). Motivational, identity-based, and self-regulatory factors associated with academic achievement of US collegiate student-athletes: A meta-analytic investigation. *Educational Psychology Review, 35*(14). 1 – 30. https://doi.org/10.1007/s10648-023-09730-8

Gebbia, M, DeJesus, C.; & Eckardt, P. (2019). Enhancing self-regulated learning in underprepared students during the first year of college. *North American Journal of Psychology, 21*(2), 225-243**.** https://www.proquest.com/scholarly-journals/enhancing-self-regulated-learning-underprepared/docview/2236687780/se-2?accountid=14872

Gill, E. & Farrington, K. (2014). The impact of an intensive learning program (ILP) on black male football student-athlete academic achievement. *Journal of College*

Student Development, 55(4), 413–418. http://doi.org/10.1353/csd.2014.0037

Goodson, A. (2020). Clustering by academic major at Historically Black Colleges and Universities. *The Journal of Negro Education, 89*(1), 24-37. https://doi.org/10.7709/jnegroeducation.89.1.0024

Haiabadi, Z., Gandomkar, R., Sohraboiyr, A., & Sandars, J. (2023). Developing low-achieving medical students' self-regulated learning using a combined learning diary and explicit training intervention. *Medical Teacher, 45*(5), 475-484. https://doi.org/10.1080/0142159x.2022.2152664

Hayat, A., Shateri, K., Amini, M., & Shokrpour, N. (2020). Relationships between academic self-efficacy, learning-related emotions, and metacognitive learning strategies with academic performance in medical students: a structural equation model. *BMC Medical Education, 20,* 1-11. http;//doi:10.1186/s12909-020-01995-9

Hensley, L., Shaulskiy, S., Zircher, A., & Sanders, M. (2015). Overcoming barriers to engaging in college academics. *Journal of Student Affairs Research and Practice, 52*(2), 176–179. http://doi:10.1080/19496591.2015.1020246

Hextrum, K. (2020). Individualized conflict: How ideology enables college athletes' educational compromises. *Studies in Higher Education, 45*(4), 755–767. https://doi.org/10.1080/03075079.2018.1554639

Hoops, L., Yu, S., Burridge, A., & Wolters, C. (2015). Impact of a student success course on undergraduate academic outcomes. *Journal of College Reading and Learning, 45*(2), 123–146. http://doi.org/10.1080/10790195.2015.1032041

Iwamoto, P., Hargis, J., Bordner, R., & Chandler, P. (2017). Self-regulated learning is a critical attribute for successful teaching and learning. *International Journal for the Scholarship of Teaching & Learning, 11*(2), 1-10. https://doi.org/10.20429/ijsotl.2017.110207

Judge, L., Peterson, J., Johnson, J., & Beller, D. (2014). Division I athletic-academic support facilities: Part of the arms race? *Research Quarterly for Exercise and Sport, Supplement, 85*(1), A114. https://www.proquest.com/scholarly-journals/division-i-athletic-academic-support-facilities/docview/1621829926/se-2?accountid=14872

Kaatrakoski, H., Littlejohn, A., & Hood, H. (2017). Learning challenges in higher education: an analysis and contradictions within open education practices. *Higher Education,74*(4), 599-615. https://doi.org/10.1007/s10734-016-0067-z

Karagiorgakis, A. & Blaker, E. (2021). The effects of stress and USCAA student-athlete academics and sport enjoyment. *College Student Journal,55*(4), 429-439. https://web.p.ebscohost.com/ehost/detail/detail?vid=3&sid=a0479857-8f6d-45fe-80bd859a457ae56a%40redis&bdata=JkF1dGhUeXBlPXNoaWImc2l0ZT1laG9zdC1saXZlJnNjb3BlPXNpdGU%3d#AN=154915741&db=eue

Khan, Y.M, Shah, M.H. & Sahibzada, H.E. (2020). Impact of self-regulated learning behavior on the academic achievement of university students. *FWU Journal of Social Sciences, 14*(2), 117-130. https://www.proquest.com/scholarly-journals/impact-self-regulated-learning-behavior-on/docview/2434402117/se-2?accountid=14872

Kitsantas, A. & Zimmerman, B. (2002). Comparing self-regulatory processes among novice, non-expert, and expert volleyball players: A microanalytic study. *Journal of Applied Sport Psychology, 14*, 91-105. https://doi.org/10.1080/10413200252907761

Levine, J., Etchison, S., & Oppenheimer, D. (2014). Pluralistic ignorance among student-athlete populations: A factor in academic underperformance. *Higher Education*, *68*(4), 525–540. http://doi.org/10.1007/s10734-014-9726-0

Li, S., Yamaguchi, S., & Takada, J. (2018). The Influence of Interactive Learning Materials on Self-Regulated Learning and Learning Satisfaction of Primary School Teachers in Mongolia. *Sustainability*, *10*(4), 1093. https://doi.org/10.3390/su10041093

Linden, T. (2018). Scrum-based learning environment: Fostering self-regulated learning. *Journal of Information Systems Education, 29*(2), 65-74. http://jise.org/

Martins, R. & dos Santos, A. (2019). Interventions in learning strategies: Study with new university students. *Paideia*, *28*, 1-9. http://dx.doi.org/10.1590/1982-4327e2839.

Mccormick, H. (2017). Outcomes-Based Career Preparation Programs for Contemporary Student-Athletes. *Journal of Applied Sports Management*, *9*(1), 135-164. http://doi.org/10.1080/10790195.2015.1032041

Mohallem-Martins, R.M. & Angeli dos Santos, A.A. (2018). Interventions in learning strategies: a study with new university students. *Paideía*, *28*, 1-9. https://www.proquest.com/scholarly-journals/intervention-learning-strategies-study-with-new/docview/2177175283/se-2

Moles, T. A., Auerbach, A. D., & Petrie, T. A. (2017). Grit happens: Moderating effects on motivational feedback and sport performance. *Journal of Applied Sport Psychology*, *29*(4), 418-433. https://doi.org/10.1080/10413200.2017.1306729.

Monda, S.J., Etzel, E.F., Shannon, V.R., & Wooding, C.B. (2015). Understanding the academic experience of freshman football athletes: Insight for sports psychology professional. *Athletic Insight, 7*(2), 115 – 128. https://www.proquest.com/scholarly-journals/understanding-academic-experiences-freshman/docview/1769724071/se-2?accountid=14872

Moose, D. & Miller, A. (2015). The cyclical nature of self-regulated learning phases: Stable between learning tasks? Journal of Cognitive Education and Psychology, 14(2), 199 -218. https://doi.org/10.1891/1945-8959.14.2.199

Murillo-Zamorano, L. R, López-Sánchez, J, Á, Godoy-Caballero, A. L., & Bueno, M. C. (2021). Gamification and active learning in higher education: Is it possible to match digital society, academia and students' interests*? International Journal of Educational Technology in Higher Education, 18*(1). https://doi:10.1186/s41239-021-00249

O'Neil, L., Amorose, A., & Pierce, S. (2021). Student-athletes′ dual commitment to school and sport: Compatible or conflicting? *Psychology of Sports and Exercise, 52*, 1-11. https://doi.org/10.1016/j.psychsport.2020.101799

Onodipe, G, Keengwe, J, & Cottrell-Yongye, A. (2020). Using learning management systems to promote self-regulated learning in a flipped classroom. *Journal of Teaching and Learning with Technology, 9*(1), 3-18.

https://doi.org/10.14434/jotlt.v9i1.29375

Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology, 8*, 422-460. http://doi.org/10.3389/fpsyg.2017.00422

Pardo, A., Hargis, F., & Ellis, R. (2017). Combining university student self-regulated learning indicators and engagement with online learning events to predict academic performance. *IEEE Transactions on Learning Communities, 10*(1), 82-92. https://doi.org/10.1109/tlt.2016.2639508

Pintrich, P. R., Smith, D. A. F., García, T., & McKeachie, W. J. (1991). A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ). Ann Arbor: to the University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.

Pravesti, C., Wiyono, B., Hamdarini, D., Triyono, F., & Atmoko, A. (2020). Examining the effects of guidance and counseling services on college students' self-regulated learning. *Journal for the Education of Gifted Young Scientist, 8*(1), 33-45. https://dio: 10.17478/jegys.664548

Rao, B., Kumar, S.A., & Dash, M. (2019). A study on the influence of academic self-efficacy and self-regulated learning on career goal clarity among postgraduate women students in Bengaluru. *The IUP Journal of Soft Skills, 13*(1), 7-19. https://www.iupindia.in/307/ijss.asp

Rashis, S. & Rena, A. R. (2019). Relationship between the levels of motivation and learning strategies of prospective teachers of higher education levels. *Bulletin of*

Education and Research, 41(1), 57-66. http://pu.edu.pk/home/journal/32

Roth, A., Ogrin S., Schmitz B. (2016). Assessing self-regulated learning in higher education: a systematic literature review of self-report instruments. *Educ. Assess. Eval. Account, 28,* 225–250. 10.1007/s11092-015-9229-2

Routon, P. & Walker, J. (2015). Student-Athletes? The impact of intercollegiate sports participation on academic outcomes. *Eastern Economic Journal, 41*(4), 592-611. https://doi.org/10.1057/eej.2014.32

Rowe, F. & Rafferty, J. (2013). Instructional design interventions for supporting self-regulated learning: Enhancing academic outcomes in postsecondary e-learning environments. *MERLOT Journal of Online Learning and Teaching*, *9*(4), 590-601. Retrieved from http://ezp.waldenulibrary.org/login?url=https://search-proquest-com.ezp.waldenulibrary.org/docview/1614663560?accountid=14872

Sainz, M.A., Ferrero, A.M., & Ugidos, A. (2019). Time management: Skills to learn and put to practice. *Education and Training, 61*(5), 635-648. https://doi.org/10.1108/et-01-2018-0027

Salamonson, Y., Ramjan, L., van den Nieuwenhuizen, S., Metcalfe, L., Chang, S., & Everett, B. (2016). Sense of coherence, self-regulated learning and academic performance in first-year nursing students: A cluster analysis approach. *Nurse Education in Practice, 17*, 208-213. https://doi.org/10.1016/j.nepr.2016.01.001

Schwonke, R. (2015). Metacognitive load-useful or extraneous concept? Metacognitive and self-regulatory demands in computer-based learning. *Educational Technology and Society*, *18*(4), 172–184. https://www.j-ets.net/ETS/index.html

Smalls, D. (2020). Do HBCU NCAA Division II collegiate basketball coaches implement a balanced academic, social, and athletic student-athlete experience*? Journal of Contemporary Athletics*, *14*(4), 253–269. https://novapublishers.com/shop/journal-of-contemporary-athletics

Stephen, J. & Rockinson-Szapkiw, A. (2021). A high-impact practice for online students: the use of a first-semester seminar course to promote self-regulation, self-direction, online learning self-efficacy. *Smart* Learning *Environments, 8*(6), https://doi.org/10.1186/s40561-021-00151-0

Stokowski, S., Dittmore, S., Stine, G. & Li, B. (2017). Resources decisions in academic services: Which factors predict positive APR scores at NCAA Division I institution? *Journal of Contemporary Athletics, 11*(3), 173-188. https://novapublishers.com/shop/journal-of-contemporary-athletics/

Stokowski, S., Rubin, L., Rode, C., Fridley, A., & Shkorupeieva, S. (2020). Separate kingdoms: Academic Advisers' perception of college athletes and athletic departments. *Mentor: An Academic Advising Journal, 22,* 1-1p.

Sung, J., Koo, G., Kim, S. Dittmore, S. (2015). Enhancement of non-academic environment by intercollegiate athletics and its intangible benefit in higher education. *Journal of Physical Education and Sport, 15*(1), 47-52. http://doi:10.7752/jpes.2015.01008

Thibodeaux, J., Deutsch, A., Kitsantas, A., & Winsler, A. (2017). First-year college students' time use: Relations with self-regulation. *Journal of Advanced Academics, 28*(1), 5-27. http://doi: 10.1177/1932202X1667686

Thye, M. & Tauschel, D. (2021). Fostering learning capacities for meaningful, healthy and efficient studying in undergraduate medical education: Evaluation of a longitudinal learning workshop. *BMC Psychology, 9*(1), 1-12. https://doi.org/10.1186/s40359-021-00631-5

Tranchsler, T. & Cotrufo, R. (2017). National Collegiate Academic Association? The implications of increased NCAA oversight of academics. *Journal of Contemporary Athletics, 11*(2), 11-118. https://novapublishers.com/shop/journal-of-contemporary-athletics/

Uz, R., & Uzan, A. (2018). The influence of blended learning environment on self-regulated and self-directed learning skills of learners. *European Journal of Educational Research, 7*(4), 877-886. https://doi.org/10.12973/eu-jer.7.4.877

Van Lankverd, W., Maas, M., Van Wijchen, J., Visser, V., & Staal, J. (2019). Self-regulated learning in physical therapy education: A non-randomized experimental study comparing self-directed and instruction-based learning. *BMC Medical Education, 19*(50, 1-19. https://doi.org/10.1186/s12909-019-1484-3

Walker, A.A. (2015). Effects of team-based learning on self-regulated learning. *International Journal of Nursing Education and Scholarship, 12*(1), 1-10. https://doi.org/10.1515/ijnes-2014-0046

Wetcho, S. & Na-Songkhla, J. (2021). Fostering pre-service teachers' reflection in the self-regulatory process through socio-emotional collaborative notetaking in the mCSL environment. *Contemporary Educational Technology, 13*(4), 319. https://doi.org/10.30935/cedtech/11074

Wolters, C. & Hussain, M. (2015). Investigating grit and its relations with college students' self-regulated learning and academic achievement. *Metacognition Learning, 10*(3), 293-311. https://doi.org/10.1007/s11409-014-9128-9

Yukhymenko-Lescroart, M. & Ariya, A. (2022). *Sport to School spillover effects of passion for sports: The role of identity in academic performance*. Psychological Reports, 125(3), 1469-1493. https://doi: 10.1177/00332941211006925

Yot-Dominguez, C. & Marcelo, C. (2017). University students' self-regulated learning using digital technologies. *International Journal of Educational Technology in Higher Education, 14*(38), 1-18. https://doi.org/10.1186/s41239-017-0076-8

Zheng, L. (2016). The effectiveness of self-regulated learning scaffolds on academic performance in computer-based learning environments: a meta-analysis. *Asia Pacific Education Review, 17*(2), 187–202. http://doi.org/10.1007/s12564-016-9426-9

Zimmerman, B. (1981). The effects of model's persistence and statements of confidence on children's self-efficacy and problem solving. *Contemporary Educational Psychology, 73*(4), 485-493. https://doi.org/10.1037/0022-0663.73.4.485

Zimmerman, B. & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of Educational Psychology, 80*(3), 284-290. https://doi.org/10.1037/0022-0663.80.3.284

Zimmerman, B. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal, 45*(1), 166-183. http://doi:

10.3102/0002831207312909

Zimmerman, B. (1989). A Social-cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329–339. http://doi.org/10.1037/0022-0663.81.3.329

Zimmerman, B. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64-71. https://doi.org/10.1207/s15430421tip4102_2

Zusho, A. (2017). Towards an integrated model of student learning in the college classroom. *Education Psychology Review, 29*(2), 301-324. https://doi.org/10.1007/s10648-017-9408

Appendix A – The Motivated Strategies of Learning Questionnaire

Motivated Strategies for Learning Questionnaire Manual

Part A. Motivation

The following questions ask about your motivation for and attitudes about this class. **Remember there are no right or wrong answers, just answer as accurately as possible.** Use the scale below to answer the questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

1	2	3	4	5	6	7
not at all true of me						very true of me

1.	In a class like this, I prefer course material that really challenges me so I can learn new things.	1	2	3	4	5	6	7
2.	If I study in appropriate ways, then I will be able to learn the material in this course.	1	2	3	4	5	6	7
3.	When I take a test I think about how poorly I am doing compared with other students.	1	2	3	4	5	6	7
4.	I think I will be able to use what I learn in this course in other courses.	1	2	3	4	5	6	7
5.	I believe I will receive an excellent grade in this class.	1	2	3	4	5	6	7
6.	I'm certain I can understand the most difficult material presented in the readings for this course.	1	2	3	4	5	6	7
7.	Getting a good grade in this class is the most satisfying thing for me right now.	1	2	3	4	5	6	7
8.	When I take a test I think about items on other parts of the test I can't answer.	1	2	3	4	5	6	7

Motivated Strategies for Learning Questionnaire Manual

		not at all true of me						very true of me
9.	It is my own fault if I don't learn the material in this course.	1	2	3	4	5	6	7
10.	It is important for me to learn the course material in this class.	1	2	3	4	5	6	7
11.	The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.	1	2	3	4	5	6	7
12.	I'm confident I can learn the basic concepts taught in this course.	1	2	3	4	5	6	7
13.	If I can, I want to get better grades in this class than most of the other students.	1	2	3	4	5	6	7
14.	When I take tests I think of the consequences of failing.	1	2	3	4	5	6	7
15.	I'm confident I can understand the most complex material presented by the instructor in this course.	1	2	3	4	5	6	7
16.	In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.	1	2	3	4	5	6	7
17.	I am very interested in the content area of this course.	1	2	3	4	5	6	7
18.	If I try hard enough, then I will understand the course material.	1	2	3	4	5	6	7
19.	I have an uneasy, upset feeling when I take an exam.	1	2	3	4	5	6	7

		not at all true of me						very true of me
20.	I'm confident I can do an excellent job on the assignments and tests in this course.	1	2	3	4	5	6	7
21.	I expect to do well in this class.	1	2	3	4	5	6	7
22.	The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.	1	2	3	4	5	6	7
23.	I think the course material in this class is useful for me to learn.	1	2	3	4	5	6	7
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.	1	2	3	4	5	6	7
25.	If I don't understand the course material, it is because I didn't try hard enough.	1	2	3	4	5	6	7
26.	I like the subject matter of this course.	1	2	3	4	5	6	7
27.	Understanding the subject matter of this course is very important to me.	1	2	3	4	5	6	7
28.	I feel my heart beating fast when I take an exam.	1	2	3	4	5	6	7
29.	I'm certain I can master the skills being taught in this class.	1	2	3	4	5	6	7
30.	I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.	1	2	3	4	5	6	7

31.	Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	1	2	3	4	5	6	7

Part B. Learning Strategies

The following questions ask about your learning strategies and study skills for this class. **Again, there are no right or wrong answers. Answer the questions about how you study in this class as accurately as possible.** Use the same scale to answer the remaining questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

1	2	3	4	5	6	7
not at all true of me						very true of me

32.	When I study the readings for this course, I outline the material to help me organize my thoughts.	1	2	3	4	5	6	7
33.	During class time I often miss important points because I'm thinking of other things.	1	2	3	4	5	6	7
34.	When studying for this course, I often try to explain the material to a classmate or friend.	1	2	3	4	5	6	7
35.	I usually study in a place where I can concentrate on my course work.	1	2	3	4	5	6	7
36.	When reading for this course, I make up questions to help focus my reading.	1	2	3	4	5	6	7
37.	I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do.	1	2	3	4	5	6	7

38.	I often find myself questioning things I hear or read in this course to decide if I find them convincing.	1	2	3	4	5	6	7
39.	When I study for this class, I practice saying the material to myself over and over.	1	2	3	4	5	6	7

		not at all true of me						very true of me
40.	Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone.	1	2	3	4	5	6	7
41.	When I become confused about something I'm reading for this class, I go back and try to figure it out.	1	2	3	4	5	6	7
42.	When I study for this course, I go through the readings and my class notes and try to find the most important ideas.	1	2	3	4	5	6	7
43.	I make good use of my study time for this course.	1	2	3	4	5	6	7
44.	If course readings are difficult to understand, I change the way I read the material.	1	2	3	4	5	6	7
45.	I try to work with other students from this class to complete the course assignments.	1	2	3	4	5	6	7
46.	When studying for this course, I read my class notes and the course readings over and over again.	1	2	3	4	5	6	7
47.	When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is	1	2	3	4	5	6	7

good supporting evidence.

48.	I work hard to do well in this class even if I don't like what we are doing.	1	2	3	4	5	6	7
49.	I make simple charts, diagrams, or tables to help me organize course material.	1	2	3	4	5	6	7

		not at all true of me						very true of me
50.	When studying for this course, I often set aside time to discuss course material with a group of students from the class.	1	2	3	4	5	6	7
51.	I treat the course material as a starting point and try to develop my own ideas about it.	1	2	3	4	5	6	7
52.	I find it hard to stick to a study schedule.	1	2	3	4	5	6	7
53.	When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions.	1	2	3	4	5	6	7
54.	Before I study new course material thoroughly, I often skim it to see how it is organized.	1	2	3	4	5	6	7
55.	I ask myself questions to make sure I understand the material I have been studying in this class.	1	2	3	4	5	6	7
56.	I try to change the way I study in order to fit the course requirements and the instructor's teaching style.	1	2	3	4	5	6	7
57.	I often find that I have been reading for this class but don't know what it was all about.	1	2	3	4	5	6	7

58.	I ask the instructor to clarify concepts I don't understand well.	1	2	3	4	5	6	7
59.	I memorize key words to remind me of important concepts in this class.	1	2	3	4	5	6	7
60.	When course work is difficult, I either give up or only study the easy parts.	1	2	3	4	5	6	7

		not at all true of me						very true of me
61.	I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying for this course.	1	2	3	4	5	6	7
62.	I try to relate ideas in this subject to those in other courses whenever possible.	1	2	3	4	5	6	7
63.	When I study for this course, I go over my class notes and make an outline of important concepts.	1	2	3	4	5	6	7
64.	When reading for this class, I try to relate the material to what I already know.	1	2	3	4	5	6	7
65.	I have a regular place set aside for studying.	1	2	3	4	5	6	7
66.	I try to play around with ideas of my own related to what I am learning in this course.	1	2	3	4	5	6	7
67.	When I study for this course, I write brief summaries of the main ideas from the readings and my class notes.	1	2	3	4	5	6	7
68.	When I can't understand the material in this course, I ask another student in this class for help.	1	2	3	4	5	6	7

69.	I try to understand the material in this class by making connections between the readings and the concepts from the lectures.	1	2	3	4	5	6	7
70.	I make sure that I keep up with the weekly readings and assignments for this course.	1	2	3	4	5	6	7
71.	Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives.	1	2	3	4	5	6	7

		not at all true of me						very true of me
72.	I make lists of important items for this course and memorize the lists.	1	2	3	4	5	6	7
73.	I attend this class regularly.	1	2	3	4	5	6	7
74.	Even when course materials are dull and uninteresting, I manage to keep working until I finish.	1	2	3	4	5	6	7
75.	I try to identify students in this class whom I can ask for help if necessary.	1	2	3	4	5	6	7
76.	When studying for this course I try to determine which concepts I don't understand well.	1	2	3	4	5	6	7
77.	I often find that I don't spend very much time on this course because of other activities.	1	2	3	4	5	6	7
78.	When I study for this class, I set goals for myself in order to direct my activities in each study period.	1	2	3	4	5	6	7
79.	If I get confused taking notes in class, I make sure I sort it out afterwards.	1	2	3	4	5	6	7

80.	I rarely find time to review my notes or readings before an exam.	1	2	3	4	5	6	7
81.	I try to apply ideas from course readings in other class activities such as lecture and discussion.	1	2	3	4	5	6	7

Appendix B: Project Study Consent Form

You are invited to take part in a research study examining the relationship between self-regulated learning skills utilized by NCAA Division I college athletes and academic eligibility. Self-regulated learning skills are the potential tools used by learners to understand and control their learning environment. These tools may include but are not limited to goal setting, self-monitoring of learning, self-motivation, and self-reinforcement. The researcher is inviting all study university athletes to be in the study. I obtained your name/contact information via the Office of Athletic Academic Advising. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Lee Grandison, who is a doctoral student at Walden University. You might already know the researcher as Professor Grandison, but this study is separate from her role at Norfolk State University.

Background Information:
The purpose of this study is to determine if there is a relationship between self-regulated learning and study skills utilized by NCAA Division I college athletes and NCAA academic eligibility. Data will be collected for one month and I am seeking 200 - 275 participants for this study.

Procedures:
If you agree to be in this study, you will be asked to spend about 20-30 minutes to complete a survey that will collect some demographic information, such as sports participation and credit hours completed, and information related to learning strategies.
Here are some sample questions:

- When I take a test, I think about items on other parts of the test I can't answer. 1 2 3 4 5 6 7. (1 being not at all true and 7 being very true)
- I usually study in a place where I can concentrate on my coursework. 1 2 3 4 5 6 7 (1 being not at all true and 7 being very true)

Voluntary Nature of the Study:
This study is voluntary and not a part of any academic class offered by NSU. You are free to accept or turn down the invitation. No one at the study university will treat you differently if you decide not to participate in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time without penalty to your current academic performance.

Payment:

Participants will be given a $5 electronic gift card. SURVEY LINK

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at lee.grandison@waldenu.edu or by phone at (757) 823-2812

Obtaining Your Consent

If you understand the study well enough to make a decision about it, please indicate your **Consent to Participate** by holding down the CTRL key and clicking Study MSLQ to complete the questionnaire.

Thank you for participating in this study and please print or save this consent form for your records.

Appendix C – Syllabus for SEM 202

NORF9OLK STATE UNIVERSITY
Department of Athletics

Syllabus SEM 202 – Study and Learning Spartan Seminar 202,

Instructor Contact Information
Professor Lee Grandison, CAS, COI, Doctoral Candidate
Office of Extended Learning
Health, Physical Education, and Exercise Science
Live Office Hours: Monday and Wednesday 2:00 PM – 4:00 PM
Virtual Office Hours: By Appointment and very flexible
Office: LBB 3007
Office Phone: 757-823-2812
Email: lgrandison@nsu.edu

Department Information
Department of Athletes
Norfolk State University
700 Park Avenue; Echols Hall
Norfolk, VA 23504
(757) 823-8152

Seminar Course Description
The purpose of SEM 202 is to assist students with learning, building, and implementing self-regulated learning skills. Engaging in self-regulation with study and learning can improve academic achievement. Students are introduced to the theory of self-regulated learning skills and are allowed to self-evaluate their current use of SRLS in their current academic practice.

Intended Student Learning Outcomes

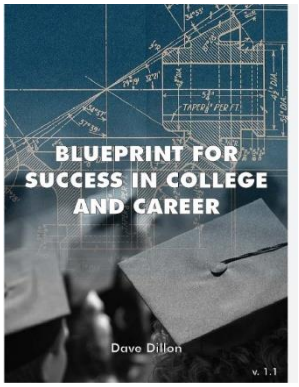
CLO1: Analyze and identify their unique intrinsic motivation with interrelated self-regulated learning skills.

CLO2: Evaluate personal learning style and modality using (VARK)

CLO3: Articulate their identity as student-athlete and their academic self-efficacy.

CLO4: Apply time management skills to create a weekly electronic calendar to balance academic excellence and athletic performance.

Required Course Material (found in the course shell)



Textbook: Dillon, D., Hill, L., Lamoreaux, A., Nissila, P.& Priester, T. (2020). *Blueprint for Success in College and Career*, OER Commons

Primary Method (s) of Instruction/Methods to Engage Students
The following instructional strategies and methods will be used to achieve the learning objectives:

- Lectures with PowerPoints
- Online Class discussions
- Audio-visual presentations
- Collaborative learning
- Assigned reading
- Blackboard (online delivery)
- Physical Activity Engagement

COURSE OUTLINE/CALENDAR (Expectations for Student Engagement in Course)

MODULE	ASSIGNMENTS
Module 1	**Athletic and Academic Identity**
	Complete the Academic and Athletic Identity Scale (AAIS).
	Read the article titled *Self-Regulated Learning* by the Teaching Excellence in Adult Literacy (MLO1.2)
	Watch the video by Thomas (2018), *Student-Athlete Identity* (MLO1.1)
	Watch the video by Heard (2018), *5 Things All Student-Athletes Need to Know* (MLO1.1)

	Reflective Journal (MLO1.1) - reflect on their score in the AAIS and compare it to their perceived athletic and academic identity.
	Discussion (MLO1.2) – Using Self-Regulated Learning Skills
Module 2	**Intrinsic Goal Motivation**
	Complete the VARK Survey
	Read the textbook, Dillon, 2017, chapters 1 – 3, pages 9 -23, covering motivators to academic learning and college scholarship preparation (MLO2)
	Watch the video on the explanation of intrinsic goal motivation (MLO2.1)
	Read the article by Santos and Longhurst (2019) on methods to improve intrinsic motivation. (MLO2.3)
	Reflective Journal (MLO2.2) – Reflection on VARK scores
	Discussion (MLO2.1: MLO2.3) – Intrinsic Motivation
Module 3	**Self- Efficacy**
	Complete the Academic Self-Efficacy and Efficacy for Self-Regulated Learning
	Read the article by Crowdhury (2021) on Four ways to improve and increase self-efficacy. (MLO3.2)
	Read the Dillon (2017) textbook chapters 17 – 19, covering pages 103 – 113. (MLO3)
	Read the article by Sharma and Nasa (2014) exploring academic self-efficacy as a predictor of academic performance. (MLO3.1)
	Reflective Journal (MLO3.1) – Reflection in academic self-efficacy
	Discussion (MLO3.2) - Develop and share a SMART goal to improve your academic self-efficacy
Module 4	**Task Value**

	Complete the vocational survey https://www.truity.com/view/tests/personality-career (MLO4.1) Read the article on Task Value and education – (MLO4.1: MLO4.2)
	Read Dillon (2017) textbook, chapter 9, pages 55-57, and unit 7, 181 – 211. (MLO4.1-MLO4.2)
	Watch the video on the value of higher education (MLO4.2)
	Reflection Journal - What is your personal value of education? If your value is low, how do you stay motivated? (MLO4.2)
	Discussion (MLO4.2) – Sharing of career options after the survey
Module 5	**Critical Thinking**
	Read the article on the definition and use of critical thinking skills (MLO5.1)
	Read Dillon (2017) textbook – unit 3, pages 123 – 144 (MLO5.1)
	Watch the video on improving critical thinking skills (MLO5.1)
	Watch the video on using concept mapping to improve critical thinking skills (MLO5.2) https://www.lucidchart.com/pages/concept-map
	Reflection Journal (MLO5.2) - Using the Free Concept Mapping tool on the Lucidchart website to map out how critical thinking skills can be helpful in both academia and athletics.
	Discussion (MLO5.1) – Mastering Attributes of Critical Thinking
Module 6	Control of Learning Belief
	Read the article on Controlling your own study and study habits (MLO6.1).
	Read the article on Effective Study Habits (MLO6.2: MLO6.3)
	Read Dillon (2017), chapter 20, pages 114 – 122 (MLO6.1-MLO6.3)

	Watch the video on active learning study applications (MLO6.3) https://youtu.be/ZNB8hxiBQ4o
	Watch the video on free study applications (MLO6.3) https://youtu.be/WvuaFeX3dKY
	Reflection Journal (MLO6.1: MLO6.2) - Who is ultimately responsible for your education, and who are the other stakeholders?
	Discussion (MLO6.3) - Discussion - Choose a free study application and create one interactive study lesson for one of your current classes.
Module 7	**Rehearsal**
	Read the importance of rehearsal in education and strategies (MLO7.1) https://www.edutopia.org/article/5-research-backed-studying-techniques
	Read the Note-taking skills article. https://lptutoring.com/3-note-taking-styles-students/ (MLO7.2)
	Read Dillon (2017) chapter 5, pages 35 – 38 (MLO7.1: MLO7.2)
	Watch: Effective Study for School (MLO7.1: MLO7.2) https://www.youtube.com/watch?v=CPxSzxylRCI&ab_channel=MemorizeAcademy
	Note-taking Crash Course (MLO7.2) https://www.youtube.com/watch?v=E7CwqNHn_Ns&ab_channel=CrashCourse
	Reflective Journal (MLO7.1) – Information Practice
	Discussion (MLO7.2) – Note-Taking Strategies
Module 8	**Time Management and Reflection**
	Read the article - Importance of Self-Reflection after Assessment. (MLO8.1)
	Read Dillion (2017) textbook, chapters 14 - 16, pages 72 - 102. (MLO8.1: MLO8.2)
	Read the article Time Management Skills for Athletes (MLO8.2)
	Review the article on Time Tools (MLO8.2)

	Reflection Journal (MLO8.1) - Choose an assessment you didn't do well. Complete the self-reflection exercise found in the self-reflection article.
	Discussion (MLO8.2) - create and share your time management schedule on MS Tasks.

Discussion Rubric

Criteria	**Met**	**Not Met**
Quality	Comments are clearly connected to all required elements in the assignment. Elements are the questions to be answered in the discussion.	Comments are clearly not connected to the required elements in the assignments. Elements are the questions to be answered in the discussion.
Professional Communication and Etiquette	Two or more written interactions on the discussion board show respect and sensitivity to peers.	Initial post and/or other posts on the discussion board. Post does not show respect and sensitivity to peers.
Grammar and Spelling	Written responses are free of grammatical, spelling, or punctuation errors. The style of writing facilitates communication.	Written responses contain numerous grammatical, spelling, or punctuation errors. The style of writing does not facilitate effective communication.

Journal Rubric

Criteria	**Met**	**Not Met**
Quality	Comments are connected to all required elements in the assignment. Elements are the questions to be answered in the journal entry.	Comments are clearly not connected to the required elements in the assignment. Elements are the questions to be answered in the journal entry.
Assignment Submission Guidelines	Needs to be more timely with assignment posts and/or needed to be longer with outlined assignment length.	Need to complete the assignment by the due date or adhere to the length criteria outlined in the assignment guidelines.

Grammar and Spelling	Written responses are mainly free of grammatical, spelling, or punctuation errors. The style of writing generally facilitates communication.	Written responses contain numerous grammatical, spelling, or punctuation errors. The style of writing does not facilitate effective communication.