

An Investigation of the Relationship between Self-Directed Learning Readiness and Resilience among Student-Athletes

by

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Abstract

Self-directed learners are people who advance based on personal initiative, capability, and determination (Knowles, 1962; Lerner, 1957; McDonald, 1967). Resilience is theorized as a positive characteristic within individuals that develop adaptations such as self-reliance and determination (Hasui, et al., 2009). In addition, resilience has been investigated in connection with gender, socio-economic status, and race (Borowsky, 2004; Howard, 1996; Ireland, 2004; Resnick, 2004; Wang & Gordon, 1994; Wang, Haertal, & Walberg, 1996). The purpose of this study was to investigate the relationship between self-directed learning readiness and resilience among student-athletes. The population was comprised of 226 student-athletes, 157 were males, and 69 were females. The student-athletes were categorized by gender and sport participation, team ($n = 146$) or individual ($n = 81$). Guglielmino's Learning Preference Assessment (formerly known as the Self-Directed Learning Readiness Scale), was used to measure the composite beliefs, proficiencies, and attributes that encompass an individual's readiness to direct his or her own learning. Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience. This scale was used to measure the capability one has to handle pressures of life. The ability to positively adapt and maintain mental stability during adversity is the principle of resilience (Herrman, et al., 2011). The results indicated that there were no differences in self-directed learning readiness and resilience by gender and sport; furthermore, the results indicated there was no relationship between self-directed learning readiness and resilience among student-athletes. The lack of research in this area merits further investigation into understanding the

relationship between gender and sport participation and examining the differences between self-directed learning readiness and resilience in student-athletes.

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CHAPTER 1: INTRODUCTION

Student-athletes attend college to obtain a degree and participate in collegiate sports. The National Collegiate Athletic Association (NCAA) requires student-athletes to maintain eligibility and make academic progress towards their degree. Student-athletes are expected to excel academically as well as athletically. The NCAA enforces regulations in order to ensure the academic progress of student-athletes. The NCAA Division I Board of Directors has labored to improve the educational experience of student-athletes stability between athletics and the university's traditional educational role (Eitzen, 2009; Gerdy, 2006; NCAA, 2005). Over the past decade public scrutiny has surrounded high profile sports such as men's basketball and football for eligibility infractions and graduation rates (Comeaux, 2011). The NCAA developed programs such as the "40/60/80 rule" and "Academic Progress Rate" to ensure student athletes eligibility and graduation (NCAA, 2005).

Collegiate athletic departments enlist support services in order to aid student-athletes academic progress (Gerdy, 1997). Learning specialists and academic counselors serve as conduits for this special population, in order to enhance the student-athletes' academic experience. According to Crookson's (1994) developmental advising definition, "the academic advisor and the student differentially engage in a series of developmental tasks, the successful completion of which results in varying degrees of learning by both parties" (p. 6). This model promotes the collaboration of advisor and student in order to solve a problem, in which the student is accountable for their actions (Gaston-Gayles, 2003). In addition, a learning specialist

advising model corresponds with Earl's (1998) advising definition "deliberate and structured student intervention at the first indication of academic difficulty in order to motivate students to seek help" (p. 28). This particular model enhances student motivation due to self-evaluation, develops study skills, and promotes participation in campus life (Gaston-Gayles, 2003.)

The role of academic advisors and learning specialists is to better prepare the student-athlete for the classroom experience. Student-athletes originate from a variety of backgrounds; therefore, no commonality exists for academic preparedness among these students (Petrie & Denson, 1999). Due to numerous time constraints as a result of participation in sports, student-athletes are charged with the responsibility of using study time as a means to achieve academic goals.

Self-directed learners are people who advance based on personal initiative, capability, and determination (Knowles, 1962; Lerner, 1957; McDonald, 1967). According to Guglielmino, Long, and Hiemstra (2004) self-directed learning is a vital and fundamental means to holistic education. Knowles (1975) proposed that individuals that take initiative in learning, learn exceedingly more than individuals who do not. Guglielmino (1994) stated, "Self-directed learning describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (p. 18).

While self-directed learning can serve as a predictor of academic success for student-athletes, Jayne (2008) proposed educational resilience serves as an additional means of academic achievement. Students are exposed to progressively challenging life environments that can considerably hinder their path to academic success (Condly, 2006). Student-athletes, in addition

to challenging life environments, maintain the responsibilities of athletic demands. The students' resilience is a catalyst to achieve academic success. Collegiate athletics demands that student-athletes are self-directed and resilient.

Statement of the Problem

Self-directed learning has been researched by many adult education practitioners and numerous models have been established (Birzer, 2004; Brockett & Hiemstra, 1991; Brookfield, 1984; Delahaye & Choy, 2000; Dynan, Cate, & Rhee, 2008; Garrison, 1997; Gibbons, 2002; Guglielmino, 1977; Guglielmino & Guglielmino, 1994; Knowles, 1975; Long, 1989; Loyens, Magda, & Rikers, 2008; Merriam, 2001; Silén & Uhlin, 2008). In addition, resilience has been investigated in relation to variables such as gender, socio-economic status, and race (Borowsky, 2004; Howard, 1996; Ireland, 2004; Resnick, 2004; Wang & Gordon, 1994; Wang, Haertal, & Walberg, 1996). However, there is a lack of research about student athletes' self-directed learning readiness and resilience abilities. The lack of research in this area merits further investigation into understanding the relationship between gender and sport participation and self-directed learning readiness and resilience in student-athletes. Guglielmino, Long, and Hiemstra (2002) contended self-direction is a universal human attribute that exists in everyone to some degree; furthermore, self-direction can come from multiple aspects of an individual's persona. Self-direction coincides with resilience, which further determines the individuals' responsibility to develop self-direction.

Purpose of Study

The purpose of this study was to investigate the relationship between self-directed learning readiness and resilience among student-athletes. Guglielmino's Self-Directed Learning Readiness Scale (SDLRS) was used to measure the composite beliefs, proficiencies, and

attributes that encompass an individual's readiness to direct his or her own learning. Gibbons (2002) indicated self-directed learning occurs when an individual increases his or her knowledge base due to their own efforts. Abdullah and Embi (2011) suggested self-directed learners are accountable for their own learning development and motivation to learn is vital in continuing achievement.

Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience or the ability to handle the pressures of life. The ability to positively adapt and maintain mental stability during adversity is a principle of resilience (Herrman, et al., 2011).

The needs of student-athletes coincide with the andragogical model (Knowles, 1975). These students must focus on existing responsibilities and problems and readiness to learn is dependent on the intrinsic motivation to accomplish goals (Bolton, 1985). Resilience is incorporated with Knowles (1975) andragogical model. Based on a study by Denny and Steiner (2009), intrinsic influences were more dominant than external factors to correlate with satisfaction in studies concerning student-athletes. Possessing self-directed learning abilities is imperative for the development and academic achievement of students (Deyo, 2010).

Significance of Study

Student-athletes learn to manage adverse situations. Luthar and Zelazo (2003) contend constructive adaptation occurs due to the presence of adversity and without it, the effects would not render the same positive outcome. Resilience is an individual's intrinsic motivation to overcome difficulty (Connor & Davidson, 2003); and according to Guglielmino (2011) intrinsic motivation is needed in order for self-direction and one's ability to be self-motivated. Student-athletes must be self-motivated in order to advance academically and athletically.

The results from the study can enhance understanding and communication with student-athletes. Student-athlete support professionals, coaches, and various other individuals who work with student-athletes can greatly benefit from the study's findings. This study can help student-athletes better understand the significance of overcoming adverse situations (Harrington, 2012) and how to build and apply their resilient ability, and they become more self-directed (Du, 2012).

The outcomes of this study can promote positive influences on the mindsets of student-athletes from adverse environments; furthermore, assist student-athlete support professionals in collaborating with these students to help them become self-directed.

Research Questions

The following questions were used in this study:

- RQ1. What are the differences in self-directed learning readiness by gender and sport?
- RQ2. What are the differences in resilience by gender and sport?
- RQ3. What is the effect of resilience on self-directed learning readiness in student-athletes?

Limitations

1. The data were collected through two self-scoring instruments – the Learning Preference Assessment (Self-Directed Learning Readiness Scale) and the Resilience Scale.
2. Data were collected from Division I student-athletes at a large southeastern university.
3. Data collected and analyzed were self-reported from student-athletes.

4. Data were collected from the following sport teams at the large southeastern university: Men's Basketball, Men's Football, Men's Track and Field, Women's Basketball, Women's Golf, Women's Track and Field, and Women's Volleyball.

Assumptions

1. Participants responded accurately and honestly.
2. Applying results to groups other than the participants of this study is done judiciously.
3. The instruments for this study are valid and reliable.
4. The findings from this study will assist student-athletes in becoming more self-directed and resilient.

Definition of Terms

40/60/80 Rule (Degree Completion) — Legislation used by the National Collegiate Athletic Association (NCAA) to increase the retention and graduation rates among Division I student-athletes. By the beginning of the student-athlete's third year enrolled at an institution, 40% of degree applicable coursework must be completed. The rate of progression must continue so by the beginning of the student-athlete's fourth year, 60% of the coursework must be completed; furthermore, 80% of the coursework must be completed by the fifth year for a specific degree program. Student-Athletes have four years of athletic eligibility and five years of academic eligibility. The 40/60/80 Rule is used as a guideline to keep NCAA institutions accountable to student-athlete graduation (NCAA Division I Manual, 2011-2012).

Academic Counselor (Student-Athlete Academic Advisor) — A professional that provides academic advising and counseling to student-athletes in multiple academic majors. Duties pertain to student time management, course load, curriculum choice, and assists in

academic goal setting. In addition, academic counselors evaluate student-athlete records and transcripts to ensure academic eligibility. The academic counselor collaborates with the student-athlete's coach in order to increase support for the student to successfully reach academic goals.

Academic Eligibility — This is the status that determines if a student can remain enrolled in an institution. If requirements are not met, a student can be put on academic warning, academic probation, or dismissed from the University. The NCAA requires student-athletes to maintain a cumulative G.P.A above 2.0.

Academic Progress Rate (APR) — Measurement of eligibility and retention for Division I student-athletes term by term. This measure is used to determine the progress of scholarship student-athletes term by term throughout the academic year. The APR measures how individuals do academically, yet it is a combined team score. Athletic teams that do not reach 925 (50% graduation rate) minimal score out of 1000 are subject to sanctions from the NCAA. If an institution does not reach the minimal 925 score, the NCAA works with the institution to make improvements. An academic plan will be required from institutions that do not meet the minimal APR requirements. Student-athlete's receiving financial aid in relation to athletics earns one retention point for staying in school; additionally, one eligibility point for being academically eligible. Sport team's total points are divided by the points possible and then multiplied by one thousand to equal the team's Academic Progress Rate score (NCAA Division I Manual, 2011-2012).

Athletic Department — Governing body over individual institutions collegiate sport teams. This department is responsible for adhering to the NCAA rules and regulations; furthermore, ensuring the athletic coaching staffs is also following NCAA rules and regulations.

Athletic departments are also responsible for raising funds for daily operations and supporting athletic events. Generally, the head of the athletic department holds the title athletic director.

Collegiate Sports — Athletic and sporting competitions organized by colleges and universities. These competitions are governed by one of three entities: The National Collegiate Athletic Association (NCAA); the National Association of Intercollegiate Athletics (NAIA); the National Junior College Athletic Association (NJCAA). Sports that are not governed by the three major entities have an individual governing body for their particular sport.

Learning Specialist — A position within the student-athlete support services program that specializes in learning strategies for pedagogy. Learning specialists work with a special population of student-athletes in order to better equip them for study, time management, and advocacy on campus. Learning specialists train mentors and act as liaisons for on-campus programs for the betterment of student-athletes.

Learning Strategies — Guidelines, philosophies, and techniques used to assist learning for students. Learning strategies are pertinent for various learning task that students face. These instructional methods aid students in comprehending, reading, listening, and studying more efficiently by helping them codify information.

National Collegiate Athletic Association (NCAA) – The governing body over collegiate athletics that regulates all rules and regulations of its members. According to the 2011–2012 NCAA Division I Manual,

By-Law 1.3.1 Basic Purpose: The competitive athletics programs of member institutions are designed to be a vital part of the educational system. A basic purpose of this Association is to maintain intercollegiate athletics as an integral part of the educational program and the athlete as an integral part of the student body and, by so doing, retain a

clear line of demarcation between intercollegiate athletics and professional sports. By-Law 1.3.2 Obligations of Member Institutions: Legislation governing the conduct of intercollegiate athletics programs of member institutions shall apply to basic athletics issues such as admissions, financial aid, eligibility and recruiting. Member institutions shall be obligated to apply and enforce this legislation, and the enforcement procedures of the Association shall be applied to an institution when it fails to fulfill this obligation.

(p. 1)

Resilience — Students who succeed in school even when the existence of adverse circumstances are apparent. When students use resilience to overcome disadvantageous circumstances, characteristics like optimism, adaptability, and positive self-esteem are displayed. Students are durable and independent when confronted with adversity. The attitude of the student is achievement oriented and has a strong willingness to solve problems logically (Waxman, Gray & Padron, 2003).

Self-Directed Learning — Individuals develop the need to become self-directed as a vital element of maturity; additionally, this element must be cultivated in order to progress promptly. Person's experiences become an extremely valuable resource for learning and collaboration with expert's methods should be explored. Self-directed learners are self-motivated by the urge to achieve, the desire for self-esteem, gratification of accomplishment, and the need to grow (Knowles, 1975)

Student-Athlete — An individual that competes in an organized competition sponsored by an academic institution that he or she is enrolled. The student is enrolled as a full-time student while simultaneously participating in a sport. Various institutions offer full scholarships in order for students to become a part of a specific sports team. The scholarship awarded to the

student-athlete primarily for the student's athletic capabilities. Bylaws from the NCAA require student-athletes to maintain a specified G.P.A (grade point average, 2.0) in order to compete in athletic events. Moreover, student-athletes cannot receive special benefits from coaches or alumni. Universities and colleges are allowed to give student-athletes supplementary support for academics (NCAA Division I Manual 2011–2012).

Student-Athlete Support Services (SASS) — The support system established by collegiate athletic departments to aid student-athletes. The support system consists of academic counselors, learning specialist, tutors, and life skill specialist.

Organization of the Study

The study was conducted to obtain information about self-directed learning readiness and resilience in student-athletes. Chapter 1 of this study indicated the statement of problem, the purpose of the study, the significance of the study, the research questions, the hypothesis, the limitations, the assumptions of the study, and the definition of terms. Chapter 2 reviews the literature investigating adult learners, student-athletes, student-athlete support services professionals, an analysis of self-directed learning, an analysis of resilience, involvement of sports and gender, self-directed learning readiness and resilience scales. Chapter 3 further discusses the purpose of this study and examines the research questions. Additionally, the hypothesis, participants, procedures, and instruments (Self-Directed Readiness Scale, Resilience Scale) are discussed. The chapter also includes reviewing the reliability and validity of the Self-Directed Readiness Scale and the Resilience Scale, and an interpretation of data analysis. Chapter 4 presents the findings. Chapter 5 concludes with a summary, findings, conclusions, discussions, implications, and recommendations for future research.

CHAPTER 2: REVIEW OF LITERATURE

Chapter 1 concentrated on the statement of the problem, the purpose of the study, the significance of the study, the research questions, the limitations, the assumptions of the study, the definition of terms, and the organization of the study. Chapter 2 examines literature of the adult learner and the student-athlete. Additionally, this chapter provides an overview of self-directed learning, resilience, gender, sport participation, and a summary of self-directed readiness and resilience instruments.

Purpose of the Study

The purpose of this study was to investigate the relationship between self-directed learning readiness and resilience among student-athletes. Guglielmino's Self-Directed Learning Readiness Scale (SDLRS) was used to measure the composite beliefs, proficiencies, and attributes that encompass an individual's readiness to direct his or her own learning. Gibbons (2002) indicated self-directed learning occurs when an individual increases his or her knowledge base due to their own efforts. Abdullah and Embi (2011) suggested self-directed learners are accountable for their own learning development, and motivation to learn is vital in continuing achievement.

Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience or the ability to handle the pressures of life. The ability to positively adapt and maintain mental stability during adversity forms the foundational principle of resilience (Herrman, et al., 2011).

The needs of student-athletes coincide with the andragogical model (Knowles, 1975). These students must focus on existing responsibilities and problems and readiness to learn is dependent on the intrinsic motivation to accomplish goals (Bolton, 1985). Resilience is incorporated with Knowles (1975) andragogical model. Based on a study by Denny and Steiner (2009), intrinsic influences were more dominant than external factors to correlate with satisfaction in studies concerning student-athletes. Possessing self-directed learning abilities is imperative for the development and academic achievement of students (Deyo, 2010).

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The Adult Learner

Knowles (1975) defines self-directed learning as “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (p. 18). Howard (1996) proposes resilience is the capability of individuals to endure adverse circumstances and sustain adaptive behaviors.

Students must have self-directed learning abilities in order to become successful (Deyo, Huynh, Kiser, Rochester, & Sturper, 2010). In addition, resilience is theorized as a positive characteristic within individuals that develops adaptations such as self-reliance and

determination (Hasui, et al., 2009). A study by Gaston-Gayles (2003) cited that student-athletes' holistic development is the main focus of college athletic departments; therefore, developing self-directed learning skills are essential for the growth of this special population of adult learners (Bourner, 2003; Dynan, Cate & Rhee, 2008; Patterson, Crooks & Lunyk-Child, 2002).

In this study, the adult learner is specified as an individual who has graduated from high school (0–4 years removed from high school) and is a current student enrolled in college. The general adult learner, at this phase, is developing self-direction. While developing self-direction, resilience must be used in order for these adult learners to overcome stress related difficulties. Resilience allows adult learners the opportunity to use prior experiences and they utilize intrinsic motivation to continue becoming self-directed. Self-direction is a foundational construct of the andragogy concept.

Malcolm Knowles is renowned as the father of adult education. Knowles (1980) defined adult learners as self-directed, independent, self-governing, and intrinsically motivated; furthermore, adult learners use past experiences to enhance the learning process (Chan, 2010). Andragogy is defined by Knowles (1980) as “the art and science of helping adults learn, in contrast to pedagogy as the art and science of teaching children” (p. 43).

Knowles' theory supports andragogical assumptions and develops foundational adult learning principles. Merriam, Caffarella, and Baumgartner (2007) proposed that Knowles' philosophy of andragogy has six major hypotheses: Learner orientation, past experiences, self-concept, learner readiness, intrinsic motivation, and the learners' need for knowledge. Knowles' andragogical assumptions assisted in the development of adult learner theory (Zmeyov, 1998). Knowles (1980) asserted:

When adult education began to be organized systematically during the 1920s, teachers of adults began experiencing several problems with the pedagogical model. One problem was that pedagogy was premised on a conception of the purpose of education—namely, the transmittal of knowledge and skills that had stood the test of time—that adult learners seemed to sense was insufficient. Accordingly, their teachers found them to be resistant frequently to the strategies that pedagogy prescribed, including fact-laden lectures, assigned readings, drills, quizzes, rote memorizing, and examinations. Adults appeared to want something more than this, and drop-out rates were high. (p. 40)

The andragogical approach has been applied to many fields due to its practicality in teaching adults to learn (Bolton, 2006). Forrest and Peterson (2006) suggest this approach is critical to the advancement of students in terms of their education. Using the principles of the andragogy, the students' interest and objectives can be tailored in order to accomplish their goals; moreover, by involving the student in the educational process, self-awareness and confidence are elevated (Chan, 2010). Adult learners apply internal motivation and previous experiences in order to accomplish educational goals (Russell, 2006). The adult learner utilizes resilience in order to become mature and self-directed.

Birzer (2004) ascertains adult learning offers learner-centered direction to enhance student abilities. Houle (1996) concluded the andragogy emphasizes the importance of engaging adult learners in their learning environment and constructing effective strategies to improve their learning. Bedi (2004) revealed that adult learners' experience help educators comprehend their needs and behaviors; furthermore, collaborative learning between adult learners and instructors support problem solving techniques in order to become self-directed.

The adult learner in this study is the student-athlete. According to Tweedell (2000), “Adults learn best in an interactive format with heavy emphasis on the practical application of their learning. Adults desire a learning situation which does not ask them to compromise family and professional demands” (p. 24). Many adult learners have numerous responsibilities beyond an educational context; therefore, tailoring the educational experience to fit their needs is paramount. Student-athletes are adult learners that have a high demand on their time and these learners have additional issues to contend with besides academics.

The Student-Athlete

Typical undergraduates attend classes and participate in numerous social activities within the university setting. Although student athletes are a part of the general student populace, these particular students have different responsibilities than their classmates. Student-athletes are a representation of a special population on various college campuses. These particular students are obligated to obey regulations and policies by the National Collegiate Athletic Association (NCAA). Unlike the typical undergraduate, the student-athlete participates in laborious practice sessions, travels within the athletic season, and sustains physical injuries (Watt & Moore, 2001).

Student-athletes arrive on college campuses by various means. These means include: high school, junior college, preparatory schools, and even the United States military. Despite criticism of special treatment toward student-athletes (Chartrand & Lent, 1987), not all student-athletes are on scholarship. Some student-athletes are walk-ons and must pay for their own college education. The ages and experiences of these students vary; therefore, student-athletes are all required to receive academic support services in order to improve the probability of academic success (Gerdy, 1997).

Gerdy (2000) describes a student-athlete as a student that is enrolled in an academic institution and participates in a varsity sport full-time. In this study, student-athletes are not differentiated by scholarship or walk-on. According to the NCAA Division I Manual,

A student-athlete is an individual whose enrollment was solicited by a member of the athletics staff or other representative of the institution's athletics interests with a view toward the student's ultimate participation in the intercollegiate athletics program. Any other student becomes a student-athlete only when the student reports for an intercollegiate squad that is under the jurisdiction of the athletics department. (p. 80)

Walk-on student athletes do not receive scholarship monies but are required to abide by NCAA rules and regulations.

Student-athletes have rules and regulations that must be abided by. Failure to do so will result in harsh sanctions such as institutional suspension or release from athletic team (NCAA Division I Manual, 2012). In addition to NCAA regulations, student-athletes must also abide by their individual academic's institutional rules and regulations. The NCAA is the governing body over intercollegiate athletics. Procedure and protocol manuals are created annually by the NCAA to ensure order for its' multi-institutional members. Eligibility requirements established by the NCAA are as follows: Student-athletes must be enrolled in at least 12 semester hours per term, passing no less than nine semester hours per term, and no less than 18 semester hours per academic year, earn a grade point average (GPA) of 2.0 or higher, and complete percentages of degree applicable hours (40-60-80 Rule). In accordance to maintaining eligibility status, the NCAA (2012) states,

Student-athletes must complete 40 percent of the coursework required for a degree by the end of their second year. They must complete 60 percent by the end of their third year

and 80 percent by the end of their fourth year. Student-athletes are allowed five years to graduate while receiving athletically related financial aid. All Division I student-athletes must earn at least nine credit hours each term to be eligible for the following term and must meet minimum grade-point average requirements that are related to an institution's own GPA standards for graduation. (p. 182)

The rules for eligibility are set in order to keep the student-athlete accountable for their graduation progress (NCAA Division I Manual); however, the Academic Progress Rate (APR) constructs a level of institutional accountability (NCAA, 2012). The Academic Progress Rate (APR) is calculated as follows:

Each student-athlete receiving athletically related financial aid earns one retention point for staying in school and one eligibility point for being academically eligible. A team's total points are divided by points possible and then multiplied by one thousand to equal the team's Academic Progress Rate score.

The NCAA calculates the rate as a rolling, four-year figure that takes into account all the points student-athletes could earn for remaining in school and academically eligible during that period. Teams that do not earn an Academic Progress Rate above specific benchmarks face penalties ranging from scholarship reductions to more severe sanctions.

Teams that score below 925 and have a student-athlete who both failed academically and left school can lose scholarships (up to 10 percent of their scholarships each year) under the immediate penalty structure.

Teams with Academic Progress Rates below 900 face additional sanctions, increasing in severity for each consecutive year the team fails to meet the standard.

Year 1: a public warning letter for poor performance

Year 2: restrictions on scholarships and practice time

Year 3: loss of postseason competition for the team (such as a bowl game or the men's basketball tournament)

Year 4: restricted membership status for an institution. The school's entire athletics program is penalized and will not be considered a part of Division I. (NCAA, 2012)

The Academic Progress Rate (APR) is used by Division I institutions to monitor the academic attainment of intercollegiate sports' teams each academic term. To ensure student-athletes and academic institutions maintain NCAA academic requirements, athletic departments enlist the services of academic counselors and learning specialists to aid in student development (Gaston-Gayles, 2003). The NCAA will impose harsh sanctions for member institutions that do not comply with its' academic standards.

In order for student-athletes to become self-directed, a support system consisting of academic counselors, learning specialists, coaches, and athletic administrators must be intact. The development of student-athletes depends upon the students' ability to become independent and resilient. According to Day, Lovato, Tull, and Ross-Gordon (2011), "The number of nontraditional students on college and university campuses continues to increase. Therefore, faculty members need to become aware of issues regarding adult learners in the college classroom" (p. 77). The student-athlete is a non-traditional student; furthermore, support from the general academe, besides athletic departments, is vital. Colligate athletes struggle to maintain equality between academics, athletics, and social activities (Adler & Adler, 1991); moreover, student-athletes cannot accomplish this feat without systematic assistance and support (Gaston-Gayles, 2003).

The demands student-athletes have are highly strenuous and require proper time management. In order for student-athletes to develop time management skills, student-athletes must mature and become self-directed. Self-direction is the personification of numerous critical aspects connected to students' responsibility and independence in learning (Silén & Ulhin, 2008). The student-athlete must attend classes full-time, participate in full practice sessions, partake in community service projects, and commit several hours to weight training. During student-athletes competition season, the demands of their strenuous schedule intensify tremendously; therefore, the ability to manage their time constraints is crucial (Finch & Gould, 2002).

Student-athletes are confronted with role conflict when one of their dual role demands usurps the other (Chartrand & Lent, 1987); furthermore, when student-athletes participate in intercollegiate athletics as a means to become a professional athlete, the role of student in their role system is deemed less important (Sack & Thiel, 1985). According to Chartrand and Lent (1987), the demands of athletics cause problems for the maturation of student-athletes; moreover, the problems these students have are time management and study skills problems, inadequate career and social development prospects, and a limited self-evaluation (Lanning, 1982). Developing student-athletes holistically is the goal of athletic departments; therefore, using the services of academic counselors and learning specialists is vital to combat the rigor of college demands.

Self-Directed Learning

According to Knowles (1975), self-directed learning is “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and

implementing appropriate learning strategies, and evaluating learning outcomes” (p. 18). Brockett and Hiemstra (1991) postulated self-directed learning is qualified as an individual characteristic and as an instructional strategy. Additionally, Brookfield (1986) described self-directed learning as a cognitive process that consists of reflection and action. Guglielmino (1977) stated, “Self-direction in learning can occur in a wide variety of situations, ranging from a teacher-directed classroom to self-planned and self-conducted learning projects” (p. 34). Gibbons (2002) indicates “Self-directed learning is any increase in knowledge, skill, accomplishment, or personal development that an individual selects and brings about by his or her own efforts using any method in any circumstances at any time” (p. 2).

Brockett and Hiemstra (2010) developed a person process context model to visualize the idea of interrelationships between person, process, and context for individuals in self-directed learning (see Figure 1).

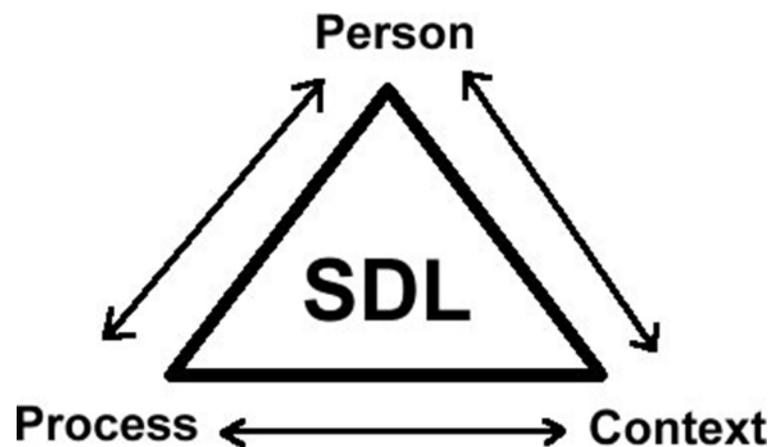


Figure 1. Model of Person Process Context Model in Self-Directed Learning (Brockett & Hiemstra, 2010)

Self-directed learning has been one of the most studied topics in adult education (Donaghy, 2005); furthermore, success of individuals is based on the development of self-direction (Deyo, Huynh, Kiser, Rochester, & Sturper, 2010). Guglielmino ascertained,

It is the contention of the authors that learner self-direction is a universal human attribute; it is present in each person to some degree. Self-direction in learning can occur in a wide variety of situations, ranging from a teacher-directed classroom to self-planned and self-conducted learning projects. Although certain learning situations are more conducive to self-direction in learning than are others, it is the personal characteristics of the learner—including his or her qualities of mind and behavior (personality) as well as acquired skills and abilities—which ultimately determine whether self-directed learning will take place in a given learning situation. The self-directed learner assumes responsibility for his or her own learning and more often chooses or influences the learning objectives, activities, resources, priorities, and levels of energy expenditure than does the other-directed learner. (p. 1)

Tullier (2010) developed a visual depiction to represent a learner's person, process, and context having balanced in all three areas. Tullier used this visualization to represent the ideal balanced self-directed learner (see Figure 2).

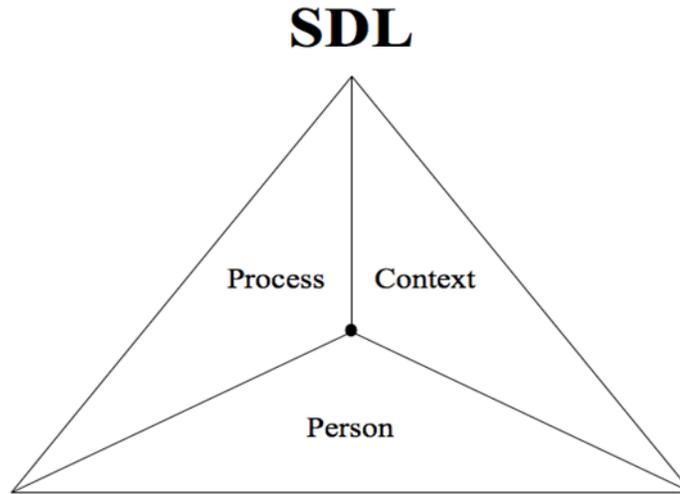


Figure 2. Model of the Ideal Self-Directed Learner being Balanced in All Three Areas (Tullier, 2010)

Tullier (2010) developed a visual depiction to represent a learner’s person, process, and context having an imbalance when one area is focused on primarily. Tullier contended a learner heavy in one area may not be a self-directed learner (see Figure 3).

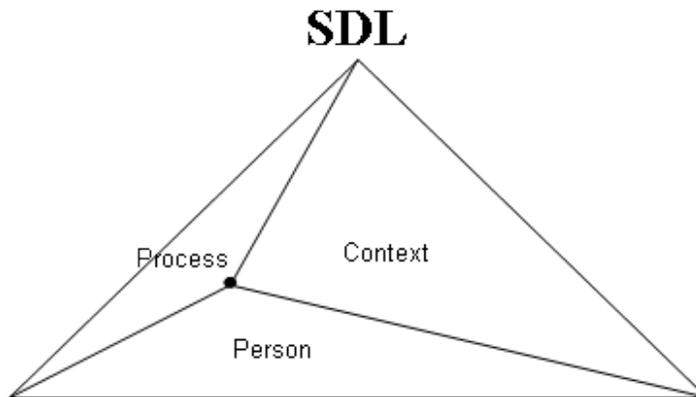


Figure 3. Model of an Unbalanced Learner (Tullier, 2010)

Each of these definitions explains self-directedness as the basis of adult development. In student-athletes, self-direction is significant in order to develop holistically. Gaston-Gayles (2003) formulated that student-athletes do not balance academics and athletics responsibilities well; therefore, introducing support services to aid in developing student-athletes is important to this special population of students. According to Long (2006),

Self-directed learners develop by a continuing process. It is unreasonable to expect people who have matured in an environment that challenged their personal integrity, that spoon fed them with information, and one that required conforming thought, to become instantaneous self-directed learners. Environments that nurture, sustain, and develop the personality and cognitive attributes identified above are important in the development of self-directed learners. (p. 4)

Self-directed learning utilizes different theoretical frameworks for practice. These approaches are as follows: behaviorism and neo-behaviorism, constructivism, critical perspectives, and humanism. Owen (2002) cited “behaviorism is based upon the premise that learning occurs via the reinforcement of desired responses. That is, human nature is shaped by environmental influences” (p. 15). Brockett and Hiemstra (1991) concluded the traditional behaviorism premise depends on environmental influence, while neo-behaviorism focuses on the collaboration of individual and environmental influences. The constructivism approach explained by Owen (2002) stated that, “Constructivists maintain that from birth, people embark on a voyage of inquiry and exploration. They are not bound by conditioning, but are different as a result of choosing to act differently. Furthermore, individuals are in a state of dynamic equilibrium in which they seek to balance their world” (p. 20).

Brookfield (1990) believed “critical perspectives of self-directed learning centers on critical incidents that involve one recording significant life events after critical thinking that involves identifying assumptions, analyzing accuracy, and reconstructing them” (p. 177). Humanism promotes individuals to discover self-actualization and the most important goal is learner development (Owen, 2002).

Resilience

Resilience is theorized as a positive characteristic within individuals that develops adaptations such as self-reliance and determination (Hasui, et al., 2009). Herrman et al. (2011) define resilience as a “positive adaptation, or the ability to maintain or regain mental health, despite experiencing adversity” (p. 259). Connor and Davidson (2003) stated, “Psychological resilience refers to an individual's capacity or tendency to thrive in the face of adversity” (p. 41). Resilience has been studied by multiple researchers from various disciplines; however, no consensus has been reached for the definition of resilience (Borman & Overman, 2004; Condly, 2006; Connor & Davidson, 2003; Downey, 2008; Galli & Vealey, 2008; Harrington, 2012; Hasui, et al., 2009; Herrman, et al., 2011; Howard, 1996; Jones, Hanton, & Connaughton, 2002; Luthar & Cicchetti, 2000; Luthar & Zelazo, 2003; Mack & Ragan, 2008; Resnick & Ireland, 2004; Wagnild, 2010).

Extensive ambiguity and misperception remains in regards to the effects of stress on individuals (Herrman, et al., 2011). A study conducted by Luthar and Zelazo (2003) indicated that resilience is a multifaceted progression that consists of factors such as risk, protective, and vulnerability. Individuals that utilize resilience will produce positive adaptations of risk, protective, and vulnerability factors. Risk factors are circumstances that expose individuals to adversity (Luthar & Cicchetti, 2000). Protective factors stimulate constructive responses to

adversity; moreover, extrinsic motivators such as support systems and character traits increase these factors (Rutter, 1987). Vulnerability factors increase the influences of adversity but with resilience, individuals can employ protective factors to overcome adversity (Luthar & Zelazo, 2003). Positive adaptations are defined as an individual's affirmative response to an adverse situation (Luthar & Zelazo, 2003).

Researchers have acknowledged various factors that promote resilience in students who face academic perils (Downey, 2008). According to Condly (2006) students face an array of difficulties within their daily life environment and these hardships have an adverse effect on academic success. Some of these risk factors include low socio-economic status, heavy drinking, ethnic bigotries, and a violent familial history (Borman & Overman, 2004). Nevertheless, these same risk factors that students face can act as motivator to utilize resilience and obtain academic success (Waxman, Gray, & Padron, 2003).

Students from adverse backgrounds who excel in academia utilize academic resilience. Wang, Haertel, and Walberg (1997) defined academic resilience as “the heightened likelihood of educational success despite personal vulnerabilities and adversities brought about by environmental conditions and experiences” (p. 2). In reference to student-athletes, their demands are rigorous and many of these students come from unsavory backgrounds (Comeaux, 2011); therefore, by using the support systems provided by athletic departments, these students can disrupt a negative course and attain academic success (Luthar, Cicchetti, & Becker, 2000). According to Herrman, et al. (2011), “The central question is how some girls, boys, women, and men withstand adversity without developing negative physical or mental health outcomes” (p. 259).

Gender

Males and females have different ethos, viewpoints, perspectives, and gender roles which merit their examining as a distinct sub-group (Belenky, Clinchy, Goldberger, & Tarule, 1986); furthermore, it is admissible to investigate conceivable dissimilarities among male and female resilient abilities (Morales, 2008). Gender in this study is an independent variable.

Morales (2008) conducted a study to investigate the differences between male and female resilient students. His sample was comprised of 31 female and 19 male low socioeconomic college students of color. The influence of race, ethnicity, class, and gender-based identities in association to academic performance were explored (Morales, 2008). Morales (2008) determined three noticeably female approaches to exceptional achievement from the data and summarized his findings as,

- Females were confronted with more opposition than males to the pursuit of their college and career goals, resulting in the need for them to overcome distinctive obstacles and challenges.
- Females were more intensely motivated in regards to their post-college professional goals than were males.
- When recognizing significant mentors (both during high school and college), sharing the same gender of the potential mentor was considerably less important for the females than for the males. (p. 203)

Morales (2008) summarized,

While the socio-academic phenomenon of academic resilience has not traditionally been characterized as a gender issue, as concluded from this research there do appear to be noteworthy differences in how females experience their resilience. On the one hand,

given the distinct gender roles, expectations, and assumptions that exist in the greater society, it is logical to assume that these phenomena would find their way into this academic resilience situation. However, as presented above, the specific manifestations of these socio-cultural dynamics are often counter-intuitive and surprising. Therefore, accepted notions of gender differences related to experiences of academic resilience should be research-based and implemented with caution. (p. 210)

Reio (2003) conducted an investigation to examine how self-directed learning readiness, previous knowledge, and curiosity affected performance in a collegiate classroom. According to the study directed by Reio (2003), gender had an effect on self-directed learning readiness and learning performance that was statistically significant. His sample consisted of 121 seniors. Fifty-three percent of the participants were female ($n = 64$), taking human development classes for secondary (63%) and elementary (37%) education that attended a large university in the mid-Atlantic region of the United States (Reio, 2003). Reio (2003) suggested self-directed learning readiness was the greatest predictor of learning performance; furthermore, “Males demonstrated significantly higher levels of self-directedness and learning performance” (p. 18); furthermore, “females demonstrated lower self-directedness and classroom learning performance in this investigation, their prior knowledge and curiosity levels were comparable to those of the males” (p. 22).

Team or Individual Sport Participation

Often in sport participation, athletes face several adversities, on and off the field of play. Jones, Hanton, and Connaughton (2002) researched the adversities athletes face during competition and defined mental toughness through the use of psychological adaptive responses as:

Having the natural or developed psychological edge that enables you to: generally, cope better than your opponents with the many demands (competition, training, lifestyle) that sport places on a performer; specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure. (p. 209)

Smith (1999) contends coping skills developed in sports are considered life skills and should be utilized by individuals outside the field of sports. Galli and Vealey (2008) formed a model for sports in resilience that consisted of athletes relying on coping strategies to manage a variety of unpleasant emotions and psychological struggles (see Figure 4).

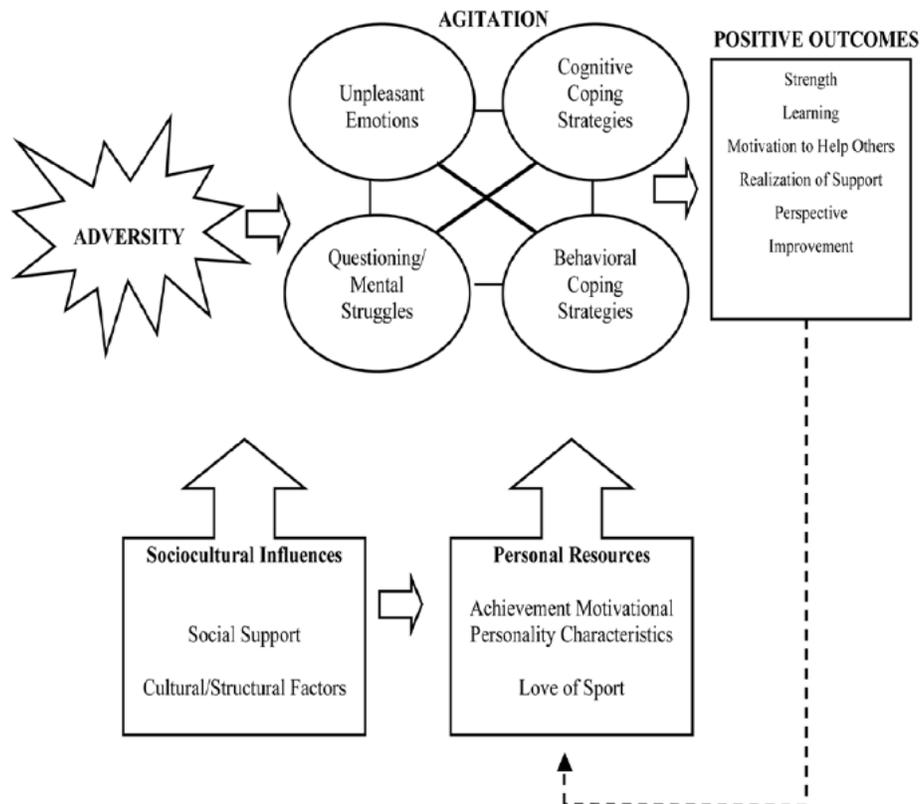


Figure 4. Model of Resilience in Sports (Galli & Vealey, 2008)

The most revered psychological skills developed through sports participation consists of increased confidence, individual sport I.Q., heightened focus, competitiveness, amplified work ethic, ability to be coached, extreme levels of optimism, and the ability to reach goals (Smith, Schutz, Smoll, & Ptacek, 1995; Williams & Krane, 2001). Several of the psychological skills related to this concept also share an association with psychological resilience protective factors (Luthar & Zelazo, 2003). Galli and Vealey (2008) contend protective factors are resilient abilities like self-confidence, self-efficacy, self-assurance, and problem solving capabilities; furthermore, these factors safeguard individuals from the negative effects of adverse circumstances such as stress, anxiety, and self-doubt. Richardson, Neiger, Jensen, and Kumpfer (1990) described that people acquire resilient abilities when a level of comfort has been obtained emotionally, bodily, and spiritually within a manner of good or bad conditions. People are continuously confronted with stressors and adversities; additionally, disturbance of individuals' comfort zone will occur if protective factors are not adequate (Galli & Vealey, 2008). Once an individual has been removed from their area of comfort, reintegration must occur; however, the integration process is either resilient or dysfunctional and the most desired reintegration process is resilient reintegration (Galli & Vealey, 2008). Galli and Vealey (2008) state,

Resilient reintegration occurs when individuals not only make it through their adversity, but acquire additional protective factors in the process. An athlete that returns from a serious injury with a greater appreciation of sport or a stronger work ethic than before the injury is an example of someone who reintegrated resiliently. Individuals who reintegrate resiliently are better prepared to cope with future adversities similar to that which they reintegrated from. (p. 318)

Richardson, Neiger, Jensen, and Kumpfer (1990) created a visual for social support and the influences that play an essential role in athletes developing resilience. The model displays the envirosocial process that allows athletes to build resiliency (see Figure 5).

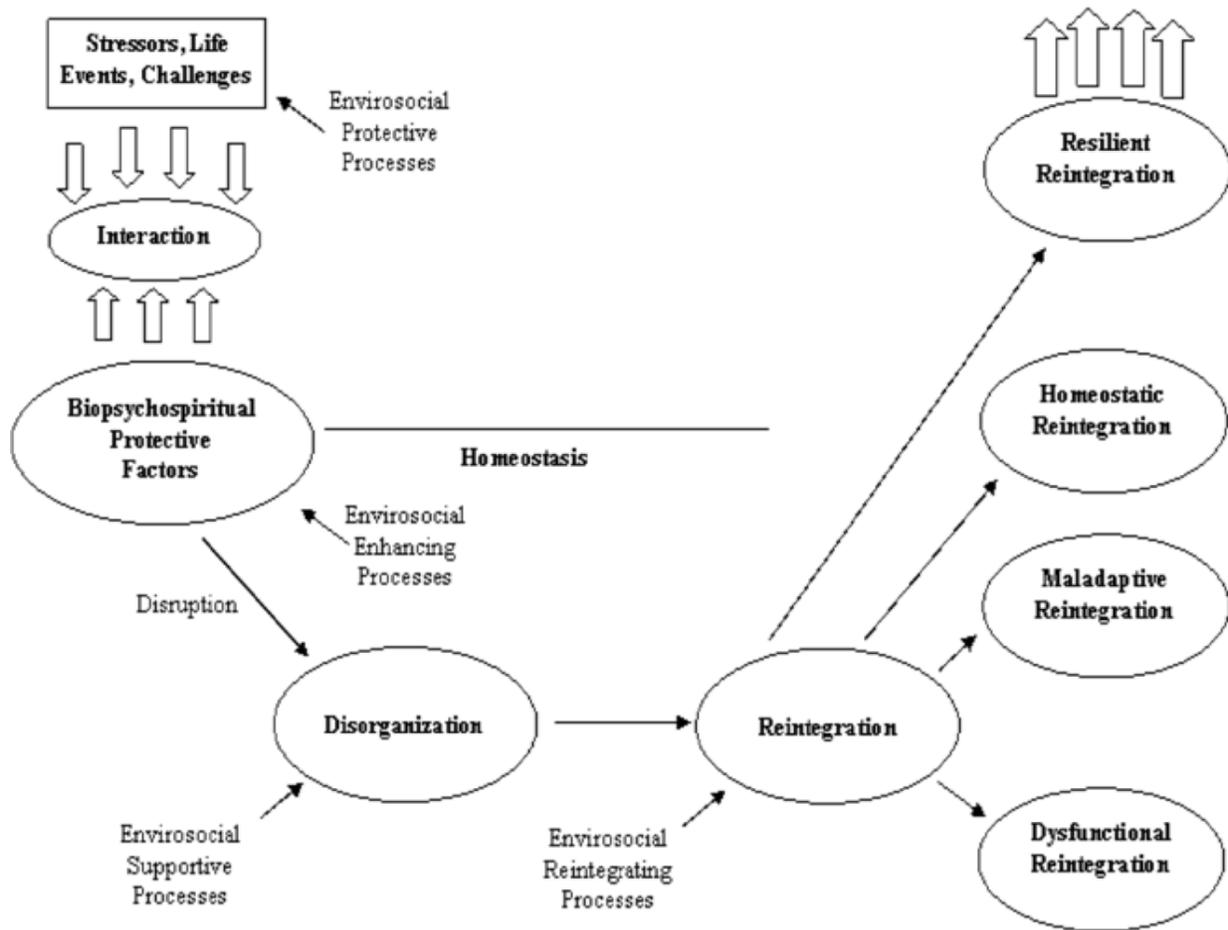


Figure 5. Model of Resilience in Sports (Richardson, Neiger, Jensen, & Kumpfer, 1990)

Self-direction is one of the most vital components of successful athletic performance (Jonker, Elferink-Gemser, & Visscher, 2010). Successful athletes are defined by their ability to access exceptional self-direction abilities (Kitsantas & Zimmerman, 2002); moreover, successful athletes, due to self-direction, have the ability to manage their time in order to give them the

capability to better their athletic skills (Jonker, Elferink-Gemser, & Visscher, 2010).

Researchers suggest participation in sports is a catalyst in the development of self-direction skills. Pintrich and Zusho (2002) propose self-directedness is developed from advice and direction from coaches and advisors, which play a key role in sports. Jonker, Elferink-Gemser, and Visscher (2010) profess self-directed learners' performance is planned and that they assess the performance during the process and evaluate the results of the performance afterward. Self-directed learners reflect on their learning process frequently whether it be sports or academics; furthermore, reflection and self-directedness are vital components for obtaining innovative and higher-level competencies (Tagawa & Imanaka, 2010).

The development of self-directed learning skills is vital to excellent sport achievement (Jonker, Elferink-Gemser, & Visscher, 2009). Successful athletic and academic performance seem to lack correspondence; however, for athletes that do achieve both academic and athletic success, the elements contributing to this are a set of self-directed learning skills (Jonker, Elferink-Gemser, & Visscher, 2009). According to Mitten (1999) "The original purpose of intercollegiate athletics was to provide an extracurricular activity for talented students who attended college primarily to earn an academic degree that would enable them to pursue a career outside of professional athletics" (p. 1). Self-direction for student athletes is important to develop for both academic and athletic responsibilities; furthermore, the need for athletic departments to assess student-athlete readiness for self-directed learning is of the utmost importance.

Instruments

Self-Directed Learning Readiness Scale

Self-directed learning is “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975, p. 18). Characterizing self-directed learners, Dr. Lucy Guglielmino (1978) wrote,

Self-direction in learning exists along a continuum; it is present in each person to some degree. In addition, it is assumed that self-direction in learning can occur in a wide variety of situations, ranging from a teacher-directed classroom to self-planned and self-conducted learning projects. (p. 34)

Guglielmino’s Self-Directed Learning Readiness Scale is an encouragement for research; furthermore, the Self-Directed Learning Readiness Scale promotes research in self-directed learning, and the relationship between self-direction with psychosocial variables (Brockett, 1985). Self-directed learners manage their own learning objectives, undertakings, resources, priorities, and effort involved in learning than the other learners (Guglielmino, 1978). Learners who are highly self-directed illustrate initiative, individuality, and diligence in learning; additionally, learners who accept the responsibility for their learning and view difficulties as tests not obstacles are other characteristics of highly self-directed learners; an individual who encompasses self-restraint yet employing inquisitiveness; a learner that aspires to gain knowledge and is confident in their capabilities; learners who are able to establish his or her time and use basic study skills; learners who have an established plan for work completion; one who receives great joy in learning and is highly goal-oriented (Guglielmino, 1978).

The Self-Directed Learning Scale (SDLRS), also known as the Learning Preference Assessment (LPA), is a self-reporting scale that utilizes items with Likert-type questions developed by Dr. Lucy Guglielmino in 1977. This scale was created to measure “the complex of attitudes, skills, and characteristics that comprise an individual's current level of readiness to manage his or her own learning” (Guglielmino, 1977). The SDLRS has been used in various countries and in numerous capacities. Over 500 major organizations have used the SDLRS around the world and this scale has been translated into various languages. These languages are as follows: Spanish (Castilian, Columbian, and Cuban), French, German, Italian, Korean, Malay, Chinese, Japanese, Finnish, Greek, Portuguese, Afrikaans, Russian, Latvian, Lithuanian, Farsi, Dutch, Polish and Turkish (Guglielmino, 2011). The Self-Directed Learning Readiness Scale consists of 58 items. The respondents are asked to read a statement and after, specify the degree in which the item precisely designates their own attitudes, beliefs, actions, or skills (lpsdlrs.com). The scores are to be interpreted as follows: 58 to 201, below average; 202 to 226, average; 227 to 290, above average. Guglielmino (2011) stated,

Some people have a low level of readiness because they have consistently been exposed to other-directed instruction. Recent research has indicated that country culture may affect scores. The most important thing to remember about your score is that it can be improved. Most persons with below average levels of self-directed learning readiness can increase their skills with practice. (p. 6)

The Self-Directed Learning Readiness Scale interprets your current level of readiness for self-directed learning. Guglielmino (2011) presents a model that interprets the scores of the SDLRS/LPA (see Figure 6). Various studies have supported the reliability and validity of the instrument (Guglielmino, 2011).

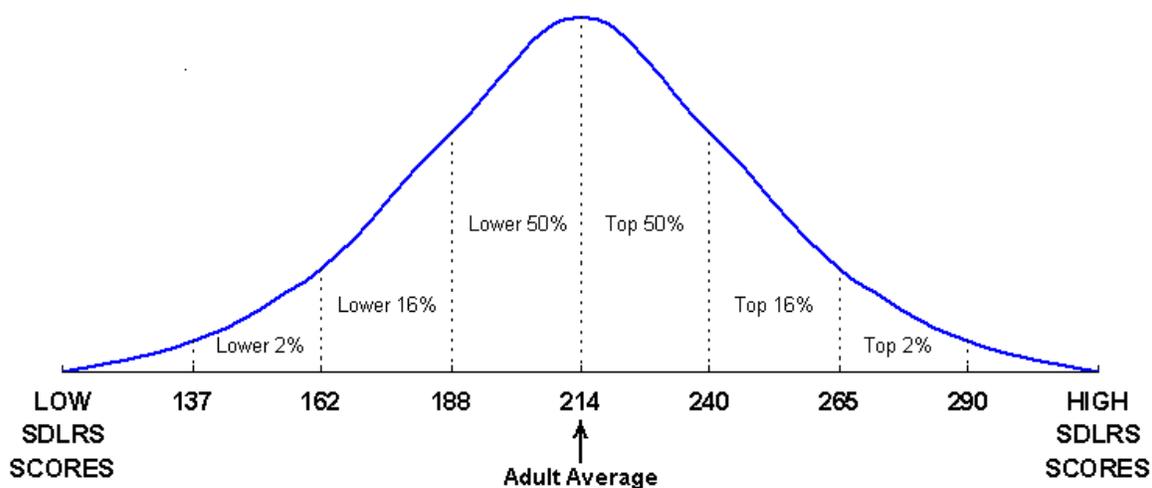


Figure 6. Score Interpretation of the SDLRS (Guglielmino, 2011)

Abraham et al. (2011) conducted a study exploring the self-directed learning readiness of undergraduate medical students at a medical college in Karnataka, India. The SDLRS was used to measure the undergraduate's level of self-directedness: high, medium, and low achievers. Additionally, the scores from the SDLRS assessment were correlated between test scores from physiology examinations. The data analyses from the study conducted by Abraham et al. (2011) showed significantly high scores for self-control in high achievers as compared to medium and low achievers. Additionally, high achievers from the SDLRS assessment maintained a higher score from the examinations. This study showed students need to be supported in their self-management abilities although they display a high desire for learning and self-control.

A study directed by Deyo et al. (2011) measured the self-directed learning readiness and academic performance for first-year doctor of pharmacy candidates at the University of Maryland. The SDLRS scores were collected and compared to participant's final course grades, quiz scores, resources for laboratory activities, and demographics. Some 60 percent of the

students from the participant sample had a high readiness for self-directed learning. The study indicated that the higher self-directed students were more probable to complete projects before laboratory, create study groups, and have specific plans for their pharmacy careers. The study found no significant association between academic performance and self-directed learning readiness.

Litzinger, Wise, and Lee (2005) examined readiness for self-directed learning of engineering students using the SDLRS. To collect the data, a cross-sectional study of students was utilized. The SDLRS scores from the first through final years were significantly associated with GPA and academic year of the study. The study reported there was no correlation with gender. Litzinger, Wise, and Lee (2005) additionally examined the influence of a problem-based learning experience on individual's self-directed learning readiness. The study showed self-directed learning readiness increased significantly for students enrolled in problem based learning courses.

Gabr and Mohamed (2011) investigated the influence of problem based learning on undergraduate nursing students enrolled in nursing administration. The study was conducted at Mansoura University's nursing department. Data collection points included the SDLRS, five different circumstances given by the investigators, a student problem solving evaluation sheet and a student opinion based questionnaire sheet. The nursing students were put into two separate groups: problem-based learning group and lecture group. The study reported a statistically significant difference among nurses who were in the problem-based learning group and lecture group. The problem-based learning group contained more self-directed learners than those in the lecturing group. Additionally, student knowledge and problem-solving grades had a statistically

significant difference. Also, Gabr and Mohamed (2008) reported students in the problem-based learning group were more eager to learn than students in the lecture group.

Resilience Scale (RS)

Resilience is “the ability to successfully cope with change or misfortune” (Wagnild & Young, 2009, p. 9). When individuals comprehend the proper response to challenges with resilience, adversities are not overpowering or disparaging (Wagnild, 2010). According to Wagnild and Young (2009), resilient people respond positively to the challenges of life with bravery and emotional fortitude, amidst fear; furthermore, crises are converted to challenges for resilient people to face head-on and conquer. Wagnild and Young (2009) stated, “Resilient persons experience the same difficulties and stressors as everyone else; they are not immune or hardened to stress, but they have learned how to deal with life’s inevitable difficulties and this ability sets them apart” (p. 1).

Resilience is a vital component to the physical and mental health of individuals; furthermore, resilience provides as a protective mechanism against depression, anxiety, fear, helplessness, and other negative emotions (Wagnild, 2010). Wagnild (2010) ascertained the core of resilience is based on five important characteristics and explains them as follows:

Meaningful Life (Purpose)

Having a sense of one’s own meaning or purpose in life is probably the most important characteristic of resilience, because it provides the foundation for the other four characteristics. Life without purpose is futile and aimless. It can be difficult to get up in the morning if there is no good reason to do so. Purpose provides the driving force in life. When we experience inevitable difficulties, our purpose pulls us forward. Despite the popular self-help literature that emphasizes ‘finding your purpose,’ rarely is a person’s

purpose lost or hidden. Our purpose typically finds us, not the other way around.

Becoming aware of your purpose is straightforward. Rather than spending a lot of time and energy turning over every stone to find your purpose, pay attention to what you are called to do every day, and your purpose will soon show itself. Ask yourself these questions:

1. What do I do that others value?
2. In what ways am I needed every day, and by whom?
3. What in my life has the most meaning? (p. 1)

Perseverance

The determination to keep going despite difficulties, discouragement, and disappointment ... that's perseverance. Winston Churchill said it best: 'Never give in, never give in ... never, never, never, never give in ...' (Churchill, 1941). Lance Armstrong, the bicyclist who overcame cancer to win the Tour de France many times said, "We have two options, medically and emotionally: give up, or fight like hell." Repeated failure or rejection (and the discouragement that follows) can be formidable roadblocks in life. They can prevent us from moving forward and attaining our goals. Resilient individuals are good at overcoming roadblocks. They tend to finish what they begin. Because of this, you can depend on them. If they say they are going to do something, they do it. Resilience is the ability to bounce back when knocked down, and this takes perseverance. It is always tempting to give up, or take the easy path. It takes courage and emotional stamina to fight the good fight, and resilient people clearly demonstrate this ability. Establishing and adhering to a routine is one way to strengthen perseverance. Setting realistic goals and attaining them builds perseverance.

In order to understand your level of perseverance, you might ask yourself these questions:

1. Do I finish what I begin?
2. How often am I defeated before I even try?
3. Do others say I give up too quickly?
4. Am I able to stay focused on my goals, or am I easily distracted? (Wagnild, 2010, p. 2)

Equanimity

Some people dwell on disappointments, are weighed down with regrets, or tend to turn everything bad that happens in their life into a catastrophe. They have a skewed and ‘out of balance’ view of life. Equanimity means balance and harmony. Resilient people learn to avoid extreme responses and ‘sit loose in the saddle.’ Resilient people understand that ‘it is an ill wind that blows no good.’ Life is neither all good nor all bad. People who respond with resilience recognize this and are open to many possibilities. This is one of the reasons resilient people are described as optimistic, because even when the situation looks doubtful, they are probably on the lookout for opportunities. Resilient people have also learned to draw on their own and others’ experiences and wisdom, and to use this to guide their responses. Equanimity also manifests itself in humor. Resilient individuals can laugh at themselves and their circumstances. Do you have equanimity? Ask yourself these questions:

1. Do I see the glass as half-full or half-empty?
2. Do I look back on my life with so many regrets that I find it difficult to move on?
3. Do I tend to create catastrophes from even the small things that happen in my life?

4. Would my family and close friends describe me as an optimist or a pessimist?

(Wagnild, 2010, p. 3)

Self-Reliance

Self-reliance is a belief in yourself, with a clear understanding of your capabilities and limitations. It comes from experience and the ‘practice, practice, practice’ that leads to confidence in your abilities. Throughout our lifetime, we encounter challenges that we meet successfully. At other times, we fail. Self-reliant individuals have learned from these experiences and have developed many problem-solving skills. Furthermore, they use, adapt, strengthen, and refine these skills throughout life. This increases their self-reliance. In order to understand your own self-reliance, answer these questions:

1. Am I aware of all the things that I do well?
2. Do others who know me well describe me as a capable person?
3. Can I usually think through a problem and work out a good solution?
4. Can I do what needs to be done in an emergency, or will I fall apart? (Wagnild, 2010, p. 3)

Coming Home to Yourself (Existential Aloneness)

While we all live in the world with other people, resilient individuals learn to live with themselves. They become their own best friends. This is what ‘coming home to yourself’ means. We must face alone much of what we face in life; if we are content with ourselves, this is easier. Coming home is a journey that begins with getting to know yourself well. Along the way, you become ‘comfortable in your own skin.’ Being existentially alone does not deny the importance of shared experiences, nor does it

demean significant and close relationships with others. It does mean that you must accept yourself as you are, warts and all.

Most of us are ordinary people going about ordinary lives, but each of us is unique. We have much to contribute to the world around us. Many people fail to recognize this about themselves and are filled with despair. A resilient individual will recognize his or own worth. Resilient people will also realize that they are in a class of their own and do not feel a pressure to conform. They are able to 'go it alone' if necessary. Ask yourself the following questions to see if you are comfortable in your own skin:

1. Am I willing to take a course of action that I know to be right, but which is unpopular with my peers?
2. As I look back at my life, what sets me apart from everyone else?
3. Am I comfortable with whom I have become? (Wagnild, 2010, p. 4)

Li (2008) conducted a study that identified predictors for active coping in different stressful situations for Taiwanese college students. The stressful situations associated were as follows: relationships, work, and academia. Wagnild and Young's resilience scale, RS-25, was used in this study to collect data. According to Li (2008) resilience was the most effective predictor of active coping in relationships and work for Taiwanese students. In academia, no predictor of active coping was identified for stressful circumstances. The findings from this study suggest the student's percepts affect their active coping in different stressful circumstances.

The Resilience Scale™ (1993) developed by Wagnild and Young, is an instrument to measure resilience directly; it has a strong reliability and consistently supported construct

validity. The Resilience Scale™ is a 25 or 14 item self-reporting instrument that contains Likert-type questions. The RS has been translated into 15 different languages. The languages are as follows: Albanian, Hong Kong Chinese, Czech, Dutch, Finnish, German, Italian, Japanese, Portuguese (Brazil and Portugal), Russian, Slovakian, Spanish, Swedish, and Tamil. The RS has been used on participants from ages 13 to 100. For the 25 item RS, a low score is 130 or lower and a high score is 161 or higher. For the RS-14, a low score is a 73 or lower and a high score is a 91 or higher (Wagnild, 2010). This instrument is used to help individuals assess their self-management skills (Wagnild, 2010). For this study, the 25 item RS instrument was used.

Tsuyoshi (2000) collected data to determine which resilience scale was more practical to use for Japanese university, junior college and professional students who were bullied. Students in this study completed both Wagnild and Young's RS-25 and the resiliency belief system. The scales were both translated from English to Japanese. A t-test was used to compare both victim and non-victim; furthermore, no significant differences were found between them. Tsuyoshi (2008) stated "the resilience scale accounted for a greater percentage of the variance than the subscales of the scale of resiliency belief system" (p. 51). Tsuyoshi (2000) suggests a more developed analysis will be needed to conclude which assessment is better for personality development of the victims of bullying.

A study directed by Ewert and Yoshino (2008) explored the effect of short-term adventure-based expeditions on levels of resilience. The study was comprised of college students who were enrolled in the recreation major. Students completed a modified version of the RS-25 to measure individual resilience. Ewert and Yoshino (2008) modified the RS-25 by adding 12 additional questions. The students were separated into two groups: experienced and non-experienced. A two-way repeated measure ANOVA specified no interaction amongst

pretest and posttest scores between the experienced and non-experienced groups. The data indicated that there was no significant difference in scores between the two groups. The data showed the posttest were significantly higher than the pretest scores.

Hasui et al. (2009) examined the predictive ability of Wagnild and Young's resilience scale. The participants for this study were 504 Japanese university students. Hasui et al. (2009) stated,

Students high in resilience were less likely to be depressed or suicidal; more likely to adopt task-oriented coping but less likely to adopt emotion-oriented coping; more likely to have secure attachment with an opposite-sex partner; less likely to have shame feeling but more likely to have pride feeling; more likely to show healthy narcissistic personality traits but less likely to show identity diffusion; more likely to report their parents as high in care and low in overprotection; and more likely to report receiving punishment as a child. (p. 15)

According to Hasui et al. (2008) the RS was a valid instrument for measuring a Japanese student populace after controlling for demographic data, depression, and life adversities. The results from the RS indicated higher resilient students were less likely to commit suicide and have negative emotional problems.

Neill (2001) proposed organized exposure to challenging circumstances can improve individuals' psychological resilience. The study consisted of 49 young adult participants, with the control group being 31 students from a psychology class at the Australian National University. The participants went on a 22-day Outward Bound Program. The Outward Bound Program is "physical, emotional and social intensity in the context of a long wilderness expedition" (p. 4). The study reinforced the assumption that controlled exposure to challenge

would improve an individuals' psychological resilience. Wagnild and Young's resilience scale was given to the participants the first and last day of the Outward Bound Program. The results showed the Outward Bound group's resilience scores were greater after the expedition than before.

Summary

Chapter 2 reviewed the literature that described the adult learner and introduced student-athletes as a special population of adult learners (Adler & Adler, 1991; Bedi, 2004; Birzer, 2004; Bolton, 2006; Chan, 2010; Chartland & Lent, 1987; Day, Lovato, Tull, & Ross-Gordon, 2011; Finch & Gould, 2002; Forrest & Peterson, 2006; Gaston-Gayles, 2003; Gerdy, 1997, 2000; Houle, 1996; Knowles, 1980; Lanning, 1982; Merriam, Caffarella, & Baumgartner, 2007; NCAA Division I Manual, 2012; NCAA.org, 2012; Russell, 2006; Sack & Thiel, 1985; Silén & Ulhin, 2008; Tweedell, 2000; Watt & Moore, 2001; Zmeyov, 1998). Additionally, this chapter provided literature discussing self-directed learning, resilience, gender, and sport participation (Belenky, Clinchy, Goldberger, & Tarule, 1986; Borman & Overman, 2004; Brockett & Hiemstra, 1991; Brookfield, 1986; Brookfield, 1990; Comeaux, 2011; Condly, 2006; Connor & Davidson, 2003; Deyo, Huyh, Kiser, Rochester, & Sturper, 2010; Donaghy, 2005; Downey, 2008; Galli & Vealey, 2008; Gaston-Gayles, 2003; Gibbons, 2002; Guglielmino, 1977, 2004; Hasui, et al., 2009; Herrman, et al., 2011; Jones, Hanton, & Connaughton, 2002; Jonker, Elferink-Gemser, & Visscher, 2009; Kitsantas & Zimmerman, 2002; Knowles, 1975; Long, 2006; Luthar & Cicchetti, 2000; Luthar, Cicchetti, & Becker, 2000; Luthar & Zelazo, 2003; Mitten, 1999; Morales, 2008; Owen, 2002; Pintrich & Zusho, 2002; Reio, 2003; Richardson, Neiger, Jensen, & Kumpfer, 1990; Rutter, 1987; Smith, 1999; Smith, Schultz, Smoll, & Ptacek, 1995; Tagawa & Imanaka, 2010; Wang, Haertel, & Walberg, 1997; Waxman, Gray, & Padron,

2003; Williams & Krane, 2001). This chapter concludes with an examination of instruments that measure self-directed learning readiness and resilience (Abraham, et al., 2011; Brockett, 1985; Deyo, Huyh, Kiser, Rochester, & Sturper, 2010; Ewert & Yoshino, 2008; Gabr & Mohamed, 2011; Guglielmino, 1977, 1978; Hasui, et al., 2009; Litzinger, Wise, & Lee, 2005; McCune, 1988; Neill, 2001; Tsuyoshi, 2000; Wagnild, 2010; Wagnild & Young, 2009).

CHAPTER 3: METHODS

Chapter 1 introduced the statement of the problem, the purpose of study, the significance of study, research questions, limitations, assumptions, and definition of terms. Chapter 2 reviewed the literature which examined the adult learner, the student-athlete, an overview of self-directed learning, resilience, gender and sport participation, and an examination of the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS).

This chapter recapitulates the purpose of the study and the research questions. Additionally, this chapter addresses the setting and participants, procedures, and instrumentation—the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS). Reliability and validity of both the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) are examined, and the chapter concludes with a description of the analysis of data.

Purpose of Study

The purpose of this study was to investigate the relationship between self-directed learning readiness and resilience among student-athletes. Guglielmino's Self-Directed Learning Readiness Scale (SDLRS), was used to measure the composite beliefs, proficiencies, and attributes that encompass an individual's readiness to direct his or her own learning. Gibbons (2002) stated self-directed learning occurs when an individual increases his or her knowledge base due to their own efforts. Abdullah and Embi (2011) suggest self-directed learners are accountable for their own learning development and motivation to learn is vital in continuing achievement.

Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience. This scale was used to measure the capability one has to handle pressures of life. The ability to positively adapt and maintain mental stability during adversity is the principle of resilience (Herrman, et al., 2011).

Research Questions

The following questions were used in this study:

- RQ1. What are the differences in self-directed learning readiness by gender and sport?
- RQ2. What are the differences in resilience by gender and sport?
- RQ3. What is the effect of resilience on self-directed learning readiness in student-athletes?

The needs of student-athletes coincide with Knowles (1975) andragogical model. These students must focus on existing responsibilities and problems; furthermore, the readiness to learn is dependent on the intrinsic motivation to accomplish goals (Bolton, 1985). Based on a study by Denny and Steiner (2009), intrinsic factors served more as motivators for student-athletes than external factors. Intrinsic motivation is important for resilience and for developing self-direction. Developing self-directed learning abilities is imperative for the development and achievement of students (Deyo, 2010).

Self-directed learning has been researched by many adult education practitioners and numerous models have been established (Birzer, 2004; Brockett & Hiemstra, 1991; Brookfield, 1984; Delahaye & Choy, 2000; Dynan, Cate, & Rhee, 2008; Garrison, 1997; Gibbons, 2002; Guglielmino, 1977; Guglielmino & Guglielmino, 1994; Knowles, 1975; Long, 1989; Loyens, Magda, & Rikers, 2008; Merriam, 2001; Silén & Uhlin, 2008). In addition, resilience has been investigated with regard to gender, socio-economic status, and race (Borowsky, 2004; Howard,

1996; Ireland, 2004; Resnick, 2004; Wang & Gordon, 1994; Wang, Haertal, & Walberg, 1996). However, there is a lack of research concerning student athletes' self-directed learning readiness and resilience abilities. The lack of research in this area merits further investigation into understanding the relationship between gender and sport participation and self-directed learning readiness and resilience in student-athletes. Understanding student-athletes' readiness for self-direction and resilient capabilities will contribute to efficient and holistic student development; additionally, the results of this study will aid individuals who work closely with these students to help them become successful collegiate student-athletes.

Setting and Participants

Student-athlete support services (SASS) utilizes various assessments to gather data from student-athletes in order to gauge their academic preparedness. The Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) are supplementary evaluations, for this study, to gain additional data to prepare student-athletes for academic success on the university campus. All the participants for this study were scholarship or walk-on student-athletes, at a large Division I southeastern university. It was explained to all the participants of this study that the information gathered would benefit each student-athlete individually. Additionally, it was stressed to the participants that the results of the assessments would not in any way affect academic standing or sport participation. It was explained to the participants that the results of the assessments were to gain an estimation of self-directed learning readiness and resilience; furthermore, these results would help SASS pair student-athletes with appropriate academic counselors, mentors, and tutors. The assessments include questions that determine how student-athletes feel about overcoming adversity and being able to manage goal orientation. The information will determine what academic assistance student-athletes will need in becoming self-

directed. All data collected from the assessments will contribute to the development process of the student-athlete. The individual results of the LPA and RS were be printed by the student-athlete. The results were turned into a central, secure location at the completion of each assessment. Any data that could identify any participants was removed and data was entered into an excel spreadsheet. Results of the data were sorted so that participants could not be identified. The Senior Associate Athletics Director has granted permission to collect and use the data from the Student-Athletes for this study (see Appendix 1). The participants were administered the SDLRS and RS individually.

The aggregate data group was comprised of 166 student-athletes, 97 were males, and 69 were females. Moreover, 87 participated on team sports (men's football, women's basketball, men's basketball, and women's volleyball) and 79 participated in individual sports (men's track and field, women's track and field, and women's golf). Each sport in this study was represented by at least one sport participant in the survey results. There were no incomplete surveys and all participants were represented in the final data totals.

The sample population of student-athletes that participated in this study were representative of the entire potential population of student-athletes of the large division I southern university. The male team sport population (37%) was higher than the male individual sport population (22%) in the total participant sample of student-athletes. The female team sport population (16%) was lower than the female individual sport population (26%) in the total participation sample of student athletes. Team sport student-athletes (52%) were the majority of participants that completed the LPA and RS for this study.

Procedures

All student-athletes at this large Division I, southern university attend academic meetings with academic counselors and learning specialists throughout the semester. During these meetings, varsity student-athletes discuss class schedules, class times, practice schedules, NCAA regulations, and multiple academic relevant matters. During one of these meetings, student athletes were asked to complete the Self-Directed Learning Readiness Scale (SDLRS) and Resilience Scale (RS). Permission to conduct this study was received by Auburn University (see Appendix 4).

The information gathered from the assessments aided in pairing student-athletes with mentors and tutors that coincide with the level of self-directedness and resilience student-athletes possess. The assessments included questions that determined how student-athletes felt about overcoming adversity and their ability to manage goal orientation. The information determined what academic assistance student-athletes needed to become self-directed. All data collected from the assessments attributed to the development process of the student-athlete. The results were returned to the researcher at the completion of each assessment. Any data that could have identify a participant was removed and data were input into an excel spreadsheet. Results of data were sorted so that participants could not be identified. The Senior Associate Athletics Director granted permission for use of the data from the Student-Athletes for this study (see Appendix 4).

The participants were administered the LPA and RS individually. The LPA and RS were presented to each participant in an academic meeting located in the athletic academic center. Participants were also given instructions via their academic counselor. They were provided verbal instructions on how to complete the survey. Each participant completed the survey individually and since the printed version of the LPA and RS is a self-scoring instrument, it

provided results to the participants after the scores were calculated. A printed copy of the results was given to each participant; furthermore, a copy was given to the Academic Counselor or the Learning Specialists. The results for this study were analyzed and presented by gender and sport participation. All other identifying marks were removed before the data was analyzed. The participants were responsible for accessing the assessments and all data were maintained as anonymous in accordance with IRB protocol.

Instrumentation

Self-Directed Learning Readiness Scale

Self-directed learning is “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975, p. 18). Characterizing self-directed learners, Dr. Lucy Guglielmino (1978) wrote,

Self-direction in learning exists along a continuum; it is present in each person to some degree. In addition, it is assumed that self-direction in learning can occur in a wide variety of situations, ranging from a teacher-directed classroom to self-planned and self-conducted learning projects. (p. 34)

Guglielmino’s Self-Directed Learning Readiness Scale promotes research in self-directed learning and the relationship between self-direction with psychosocial variables (Brockett, 1985). Self-directed learners manage their own learning objectives, undertakings, resources, priorities, and effort involved in learning than the other learners (Guglielmino, 1978). Learners who are highly self-directed demonstrate initiative, individuality, and diligence in learning; additionally, learners who accept the responsibility for their learning and view difficulties as tests not

obstacles possess characteristics of highly self-directed learners. A self-directed learner is an individual who encompasses self-restraint yet employs inquisitiveness; a learner that aspires to gain knowledge and is confident in their capabilities; a learner who is able to establish his or her time schedule and use basic study skills. A learner who has an established plan for work completion and who receives great joy in learning is considered a self-directed learner (Guglielmino, 1978).

The Self-Directed Learning Readiness Scale (SDLRS), also known as the Learning Preference Assessment (LPA), is a self-reporting scale that utilizes items with Likert-type questions developed by Guglielmino in 1977. This scale was created to measure “the complex of attitudes, skills, and characteristics that comprise an individual’s current level of readiness to manage his or her own learning” (Guglielmino, 1977). The SDLRS has been used in various countries for a wide variety of purposes. Over 500 major organizations have used the SDLRS around the world. The scale has been translated into various languages. These languages are as follows: Spanish (Castilian, Columbian, and Cuban), French, German, Italian, Korean, Malay, Chinese, Japanese, Finnish, Greek, Portuguese, Afrikaans, Russian, Latvian, Lithuanian, Farsi, Dutch, Polish and Turkish (Guglielmino, 2011).

The Self-Directed Learning Readiness Scale consists of 58 items. The respondents are asked to read a statement and after, specify the degree in which the item precisely designates their own attitudes, beliefs, actions, or skills (Guglielmino, 2011). The scores are to be interpreted as follows: 58 to 201, below average; 202 to 226, average; 227 to 290, above average.

The Self-Directed Learning Readiness Scale interprets your current level of readiness for self-directed learning; Guglielmino (2011) presents a model that interprets the scores of the

SDLRS/LPA (see Figure 6). Various studies have supported the reliability and validity of the instrument (Guglielmino, 2011).

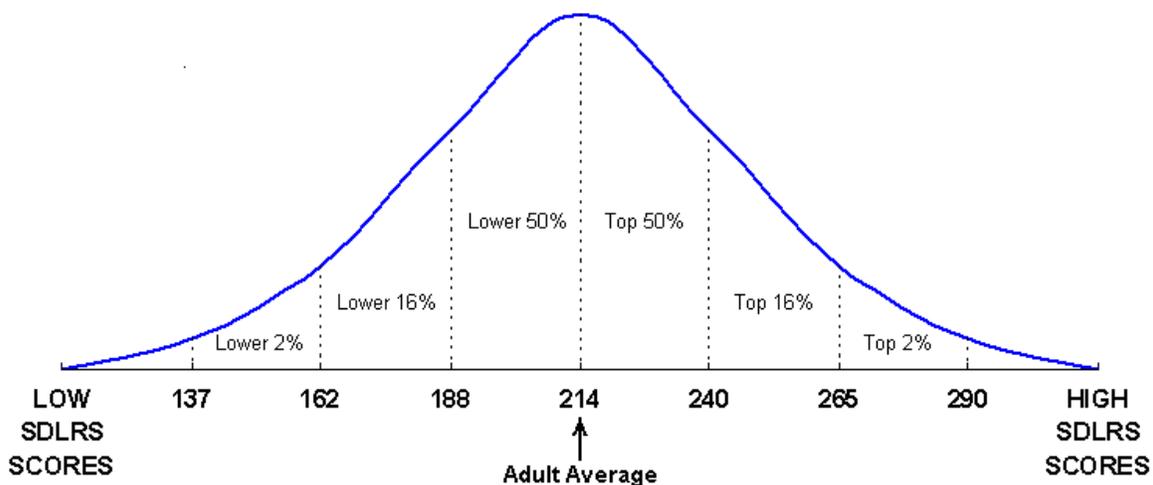


Figure 6. Score Interpretation of the SDLRS (Guglielmino, 2011)

Reliability and Validity

Self-Directed Learning Readiness Scale (SDLRS)

Reliability is commonly defined as the consistency of the results (Ross & Shannon, 2008). Guglielmino and Guglielmino (1991) reported that the Self-Directed Learning Readiness Scale (SDLRS) produced a .94 reliability coefficient based on a 3,151 individual, split-half Pearson product moment correlation with a Spearman-Brown correction. Validity is generally defined as the degree to which an assessment measures what it claims to measure (Ross & Shanon, 2008). A comprehensive review of the Self-Directed Learning Readiness Scale/ Learning Preference Scale (SDLRS) conducted by Delahaye and Choy (2000) inspected construct, content, and criterion-related validity. Delahaye and Choy (2000) stated, “there has been extensive support for the LPA in the literature as an accurate and useful instrument for measuring readiness for self-directed learning” (p. 46).

Resilience Scale (RS)

Resilience is “the ability to successfully cope with change or misfortune” (Wagnild & Young, 2009, p. 9). When individuals comprehend the proper response to challenges with resilience, adversities are not overpowering or disparaging (Wagnild, 2010). According to Wagnild and Young (2009), resilient people respond positively to the challenges of life with bravery and emotional fortitude, amidst fear; furthermore, crises are converted to challenges for resilient people to face head-on and conquer. Wagnild and Young (2009) stated, “Resilient persons experience the same difficulties and stressors as everyone else; they are not immune or hardened to stress, but they have learned how to deal with life’s inevitable difficulties and this ability sets them apart” (p. 1).

The Resilience Scale™ (1993) developed by Wagnild and Young, is an instrument designed to measure resilience directly; it has a strong reliability and consistently supported construct validity. The Resilience Scale™ is a 25 or 14 item self-reporting instrument that contains Likert-type questions. The RS has been translated into 15 different languages: Albanian, Hong Kong Chinese, Czech, Dutch, Finnish, German, Italian, Japanese, Portuguese (Brazil and Portugal), Russian, Slovakian, Spanish, Swedish, and Tamil. The RS has been used on participants from ages 13 to 100. For the 25-item RS, a low score is 130 or lower and a high score is 161 or higher. For the RS-14, a low score is a 73 or lower and a high score is a 91 or higher (Wagnild, 2010). This instrument is used to help individuals assess their self-management skills (Wagnild, 2010).

Wagnild and Young (1993) reviewed 12 studies that used the Resilience Scale. The studies acknowledged Resilience Scale scores, sample demographics, and study variables (Wagnild & Young, 1993). Wagnild and Young (1993) reported Cronbach’s alpha coefficients

ranging from .72 to .94, which supports the internal consistency reliability of the Resilience Scale. Examples of resilience include one's ability to manage anxiety, health promoting activities, forgiveness, and stress. The Resilience Scale has been used with various ages, educational, and socioeconomic backgrounds (Wagnild & Young, 1993).

Analysis of Data

The data, or dependent variables (DV), were provided by the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS). The data consisted of self-directed learning readiness and resilience preference scores obtained from 166 student-athlete surveys. Every student-athlete completing the SDLRS also completed the RS. The SDLRS and RS questionnaire items were combined with gender and type of sport participation into an electronic spreadsheet. Version 20 of SPSS was used to analyze the results of the data gathered from the student-athletes.

Some of the research questions in this study require the use of descriptive statistics. Bickel and Lehmann (1975) described descriptive statistics as “measures of different aspects of a population (or a distribution of population values). The population may be finite, as is the case for example when it consists of a set of data, or it may be infinite” (p. 1038). Gravetter and Wallnau (2008) suggested “descriptive statistics are techniques that take raw scores and organize or summarize them in a form that is more manageable” (p. 6). The descriptive statistics, or independent variables (IV) used for this study are gender and sport participation. This study used the scores from surveys of student-athletes to determine self-directed learning readiness and resilience.

A one-way Analysis of Variance (ANOVA) was used to measure the differences in self-directed learning readiness by gender and sport and the differences in resilience by gender and

sport. A one-way Analysis of Variance (ANOVA) is a procedure used to compare means of two or more samples (Green & Salkind, 2008). The one-way ANOVA test suggests the null hypothesis represents populations of equal means; however, the alternative hypothesis suggests that at least one of these means will be different (Green & Salkind, 2008). The ANOVA yields an F-statistic; moreover, the F-statistic subsists as a ratio of the variance enumerated amid the means to the variance within the samples (Ross & Shannon, 2008). According to Freeman and Campbell (2007), the one-way ANOVA is a procedure that tests whether the means differ in any group. The one-way ANOVA divides the variability in a dataset and methodically between groups (Green & Salkind, 2008). The null hypothesis suggests the means are the same and amid variances are anticipated to be the same (Ross & Shannon, 2008). Therefore, for this research a one-way ANOVA was used given that the scores were continuous and there are multiple groups.

Linear regression was used to measure the effect of resilience on self-directed learning readiness in student-athletes. A linear regression technique is used to represent the relationship between two variables by applying a linear equation to experiential data (Green & Salkind, 2008). One of the variables expressed as an explanatory variable; furthermore, the additional variable is expressed as the dependent variable. Utilizing the linear regression model requires the variables of interest to display a relationship; however, the variables selected do not have to cause the other but must have a significant correlation among the two variables (Green & Salkind, 2008). The correlation coefficient is a valuable statistical measure used for association between two variables (Green & Salkind, 2008). The values to determine the strength between the two variables association are between -1 and 1. Green and Salkind (2008) ascertained the equation for a linear regression line is $Y = a + bX$. The X represents the explanatory variable and Y represents the dependent variable. The slope is represented as b , while the intercept is

represented as a . Lipovetsky (2006) states “The dependent variable in a regular linear regression is a numerical variable, and in these models the dependent variable has varying values” (p. 1113).

Summary

This chapter identified the purpose of the study and the research questions. Additionally, this chapter delineated the participants as varsity student-athletes and the setting at a large Division I southern university. The procedures of the study and the instrumentation – Self-directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) were examined and explained. The chapter concluded with an analysis of the validity and reliability of the Self-directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) instruments; furthermore, the chapter explains the analysis of data that was used for the study. The data prescribed that descriptive statistics be used along with a one-way ANOVA and a linear regression.

CHAPTER 4: FINDINGS

Chapter 1 concentrated on the statement of the problem, the purpose of the study, the significance of the study, the research questions, the limitations, the assumptions of the study, the definition of terms, and the organization of the study. Chapter 2 examines literature of the adult learner and the student-athlete. Additionally, this chapter provides an overview of self-directed learning, resilience, gender, sport participation, and a summary of self-directed readiness and resilience instruments. Chapter 3 identified the purpose of the study and the research questions. Additionally, this chapter delineated the participants as varsity student-athletes and the setting is at a large Division I southeastern university. The procedures of the study and the instrumentation – Self-directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) were examined and explained. The chapter concluded with an overview of the validity and reliability of the Self-directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) instruments; furthermore, the chapter explains the data procedures that were used in the study. Descriptive statistics were used along with a one-way ANOVA and linear regression. Chapter 4 concentrates on addressing the research questions and the results of the data in regards to student-athletes' self-directed learning readiness and resilience.

Purpose of the Study

The purpose of this study was to investigate the relationship between self-directed learning readiness and resilience among student-athletes. Guglielmino's Self-Directed Learning Readiness Scale (SDLRS), was used to measure the composite beliefs, proficiencies, and

attributes that encompass an individual's readiness to direct his or her own learning. Gibbons (2002) indicated self-directed learning occurs when an individual increases his or her knowledge base due to their own efforts. Abdullah and Embi (2011) suggested self-directed learners are accountable for their own learning development and motivation to learn is vital in continuing achievement.

Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience or the ability to handle the pressures of life. The ability to positively adapt and maintain mental stability during adversity is a principle of resilience (Herrman, et al., 2011).

The needs of student-athletes coincide with the andragogical model (Knowles, 1975). These students must focus on existing responsibilities and problems and readiness to learn is dependent on the intrinsic motivation to accomplish goals (Bolton, 1985). The andragogical model, for student-athletes, is dependent upon resilience. Based on a study by Denny and Steiner (2009), intrinsic influences were more dominant than external factors to correlate with satisfaction in studies concerning student-athletes. Possessing self-directed learning abilities is imperative for the development and academic achievement of students (Deyo, 2010).

Research Questions

The following questions were used in this study:

- RQ1. What are the differences in self-directed learning readiness by gender and sport?
- RQ2. What are the differences in resilience by gender and sport?
- RQ3. What is the effect of resilience on self-directed learning readiness in student-athletes?

Demographics

Sample

The total participant sample consisted of 166 varsity student-athletes from a large Division I, southeastern university. Of the participant sample, 97 were male and 69 were female. Represented in the sample group were seven varsity sports: men's football, men's basketball, men's track and field, women's track and field, women's golf, women's volleyball and women's basketball, totaling 166 student-athletes. The team group consisted of 87 student-athletes on team sports (men's football, women's basketball, men's basketball, and women's volleyball) that made up 52% of the participants. The individual sport group consisted of 79 student-athletes (men's track and field, women's track and field, and women's golf) that made up 48% of the participants for this study. The participant sample contained at least one student-athlete from each of the sport groups represented. The participant group of student-athletes were as follows: men's football, 46; men's basketball, 15; men's track and field, 36; women's track and field, 34; women's basketball, 12; women's volleyball, 14; women's golf, 9. The number of team participants may be affected by gender since there are typically more male team sport than male individual sports. There were more male team sport student-athletes than all female student-athlete participants (team and individual).

Instruments

An average score for the SDLRS is 214 (Guglielmino, 2011). The means for student-athletes that completed the SDLRS were higher than an average score. The mean for men was 239.63, while the mean for women was 241.67. The means for each sport that completed the SDLRS are as follows: men's football, 240.24; men's basketball, 238.13; men's track and field, 239.47; women's track and field, 239.91; women's basketball, 243.75; women's volleyball,

242.21; women's golf, 244.67. A low score for the RS is 130 or lower and a high score is 161 or higher (Wagnild, 2010). The average mean for student-athletes that completed the RS maintained high scores. The mean for men that completed the RS was 171.27, while the average mean for women was 172.01. The average mean for each sport that completed the RS is as follows: men's football, 171.89; men's basketball, 170.60; men's track and field, 170.75; women's track and field, 171.68; women's basketball, 172.33; women's volleyball, 171.71; women's golf, 173.33. The survey results suggest that student-athletes are highly self-directed and resilient.

Results

Research question 1 asked "What are the differences in self-directed learning readiness by gender and sport?" The one-way ANOVA procedure was used to address the research question. In one analysis, gender was the independent variable and self-directed learning readiness as the dependent variable. Using the alpha level of .05, Levene's test indicated that the assumption of homogeneity of variances was not violated $F(1,164) = 1.334, p = .250$. Table 1 represents Levene's test of equality of variances. The assumption for an ANOVA is that the variances of the dependent variable are the same across the studied groups. For Levene's test, equality of variances for gender with self-direction as the dependent variable, the assumption was not violated. The reported p-value ($p = .250$) for Levene's test, equality of variances for gender with self-direction as the dependent variable, was greater than .05; therefore, the variances are not significantly different for gender.

Table 1

Levene's Test, Equality of Variances for Gender

Dependent Variable: Self-Direction			
F = 1.334	df1 = 1	df2 = 164	Sig. = .250

The ANOVA for gender was not statistically significant, $F(1,164) = 3.539$, $p = .062$.

Table 2 represents the test between subjects.

Table 2

ANOVA Test for Gender, Dependent Variable: Self-direction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	167.431 ^a	1	167.431	3.539	.062	.021
Intercept	9339774.660	1	9339774.660	197387.690	.000	.999
Gender	167.431	1	167.431	3.539	.062	.021
Error	7759.973	1	64	47.317		
Total	9607485.000	166				
Corrected Total	7927.404	165				

The Self-Directed Learning Readiness Scale consists of 58 items. The respondents are asked to read a statement and after, specify the degree in which the item precisely designates their own attitudes, beliefs, actions, or skills (Guglielmino, 2011). The scores are to be interpreted as follows: 58 to 201, below average; 202 to 226, average; 227 to 290, above average

(Guglielmino, 2011). For both male and female participants in this study, the mean scores were above average according to the SDLRS. Additionally, the effect size was small $\eta^2 = .021$. Table 3 represents the group means and standard deviation.

Table 3

Descriptive Statistics for Gender, Dependent Variable: Self-Direction

Gender	Mean	Std. Deviation	N
Male	239.63	7.01385	97
Female	241.67	6.69331	69
Total	240.48	6.93144	166

In a second analysis, sport was the independent variable and self-directed learning readiness was the dependent variable. Using the alpha level of .05, Levene’s test indicated that the assumption of homogeneity of variances was not violated $F(6,159) = 1.087, p = .372$. Table 4 represents Levene’s test of equality of variances. The assumption for an ANOVA is that the variances of the dependent variable are the same across the studied groups. For Levene’s test, equality of variances for sport with self-direction as the dependent variable, the assumption was not violated. The reported p-value ($p = .372$) for Levene’s test, equality of variances for sport with self-direction as the dependent variable, was greater than .05; therefore, the variances are not significantly different for sport.

Table 4

Levene's Test, Equality of Variances for Sport

Dependent Variable: Self-Direction			
F = 1.087	df1 = 6	df2 = 159	Sig. = .372

The ANOVA for sport was not statistically significant, $F(6,159) = 1.636$, $p = .140$.

Table 5 represents the test between subjects.

Table 5

ANOVA Test for Sport, Dependent Variable: Self-Direction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	460.986 ^a	6	76.831	1.636	.140	.058
Intercept	6927998.192	1	6927998.192	147534.169	.000	.999
Sport	460.986	6	167.431	1.636	.140	.058
Error	7466.418	159	46.959			
Total	9607485.000	166				
Corrected Total	7927.404	165				

For all sport participants in this study, the mean scores were above average according to the SDLRS. Additionally, the effect size was small $\eta^2 = .058$. Table 6 represents the group means and standard deviation.

Table 6

Descriptive Statistics for Sport, Dependent Variable: Self-Direction

Sport	Mean	Std. Deviation	N
Football	240.24	5.94	46
Men's Basketball	238.13	9.05	15
Men's Track and Field	239.47	7.44	36
Women's Track and Field	239.91	6.82	34
Women's Basketball	243.75	7.97	12
Women's Volleyball	242.21	3.93	14
Women's Golf	244.67	6.75	9
Total	240.48	6.93	166

Research question 2 was “What are the differences in resilience by gender and sport?” The one-way ANOVA procedure was used to address the research question. In the first analysis, gender was the independent variable and resilience was the dependent variable. Using the alpha level of .05, Levene’s test indicated that the assumption of homogeneity of variances was not violated, $F(1,164) = .064$, $p = .800$. Table 7 represents Levene’s test of equality of error variances. The assumption for an ANOVA is that the variances of the dependent variable are the same across the studied groups. For Levene’s test, equality of variances for gender with resilience as the dependent variable, the assumption was not violated. The reported p-value ($p = .800$) for Levene’s test, equality of variances for gender with resilience as the dependent variable, was greater than .05; therefore, the variances are not significantly different for gender.

Table 7

Levene's Test, Equality of Variances for Gender

Dependent Variable: Resilience			
F = .064	df1 = 1	df2 = 164	Sig. = .800

The ANOVA was not statistically significant, $F(1,164) = 2.368, p = .126$. Table 8 represents the test between subjects.

Table 8

ANOVA Test for Gender, Dependent Variable: Resilience

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	22.465 ^a	1	22.465	2.368	.126	.014
Intercept	4751340.465	1	4751340.465	500778.667	.000	1.000
Gender	460.986	1	22.465	2.368	.126	.014
Error	1556.016	164	9.488			
Total	4888472.000	166				
Corrected Total	1578.482	165				

The Resilience Scale is an instrument that measures resilience. The Resilience Scale is a 25- or 14-item self-reporting instrument that contains Likert-type questions. For the 25-item RS, a low score is 130 or lower and a high score is 161 or higher (Wagnild, 2010). For both male and female participants in this study, the mean scores were high according to the RS.

Additionally, the effect size was small $\eta^2 = .014$. Table 9 represents the group means and standard deviation.

Table 9

Descriptive Statistics for Gender, Dependent Variable: Resilience

Gender	Mean	Std. Deviation	N
Male	171.27	2.99484	97
Female	172.01	3.19693	69
Total	171.58	3.09299	166

In the second analysis, sport acted as the independent variable and resilience as the dependent variable. Using the alpha level of .05, Levene's test indicated that the assumption of homogeneity of variances was not violated $F(6,159) = 2.151, p = .051$. Table 10 represents Levene's test of equality of variances.

Table 10

Levene's Test, Equality of Variances for Sport

Dependent Variable: Resilience			
F = 2.151	df1 = 6	df2 = 159	Sig. = .051

The ANOVA was not statistically significant, $F(6,159) = 1.391, p = .221$. Table 11 represents the test between subjects.

Table 11

ANOVA Test for Sport, Dependent Variable: Resilience

Source	Type III Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
Corrected Model	78.710 ^a	6	13.118	1.391	.22	.050
Intercept	3513082.381	1	3513082.381	372443.466	.000	1.000
Gender	78.710	6	13.118	1.391	.221	.050
Error	1499.772	159	9.433			
Total	4888472.000	166				
Corrected Total	1578.482	165				

For all sport participants in this study, the mean scores were above average according to the RS. Additionally, the effect size was small $\eta^2 = .050$. Table 12 represents the group means and standard deviation.

Table 12

Descriptive Statistics for Sport, Dependent Variable: Resilience

Sport	Mean	Std. Deviation	N
Football	171.89	2.81	46
Men's Basketball	170.60	1.92	15
Men's Track and Field	170.75	3.47	36
Women's Track and Field	171.68	2.36	34
Women's Basketball	172.33	3.16	12
Women's Volleyball	171.71	4.25	14
Women's Golf	173.33	3.28	9
Total	171.58	3.09	166

Research question 3 was “What is the effect of resilience on self-directed learning readiness in student-athletes?” A linear regression analysis was conducted to address the research question, what is the effect of resilience on self-directed learning readiness in student-athletes? In the analysis, self-directed learning readiness acted as the dependent variable and resilience as the independent variable. The scatterplot for the two variables, as shown in Figure 10, indicates that the two variables are not linearly related.

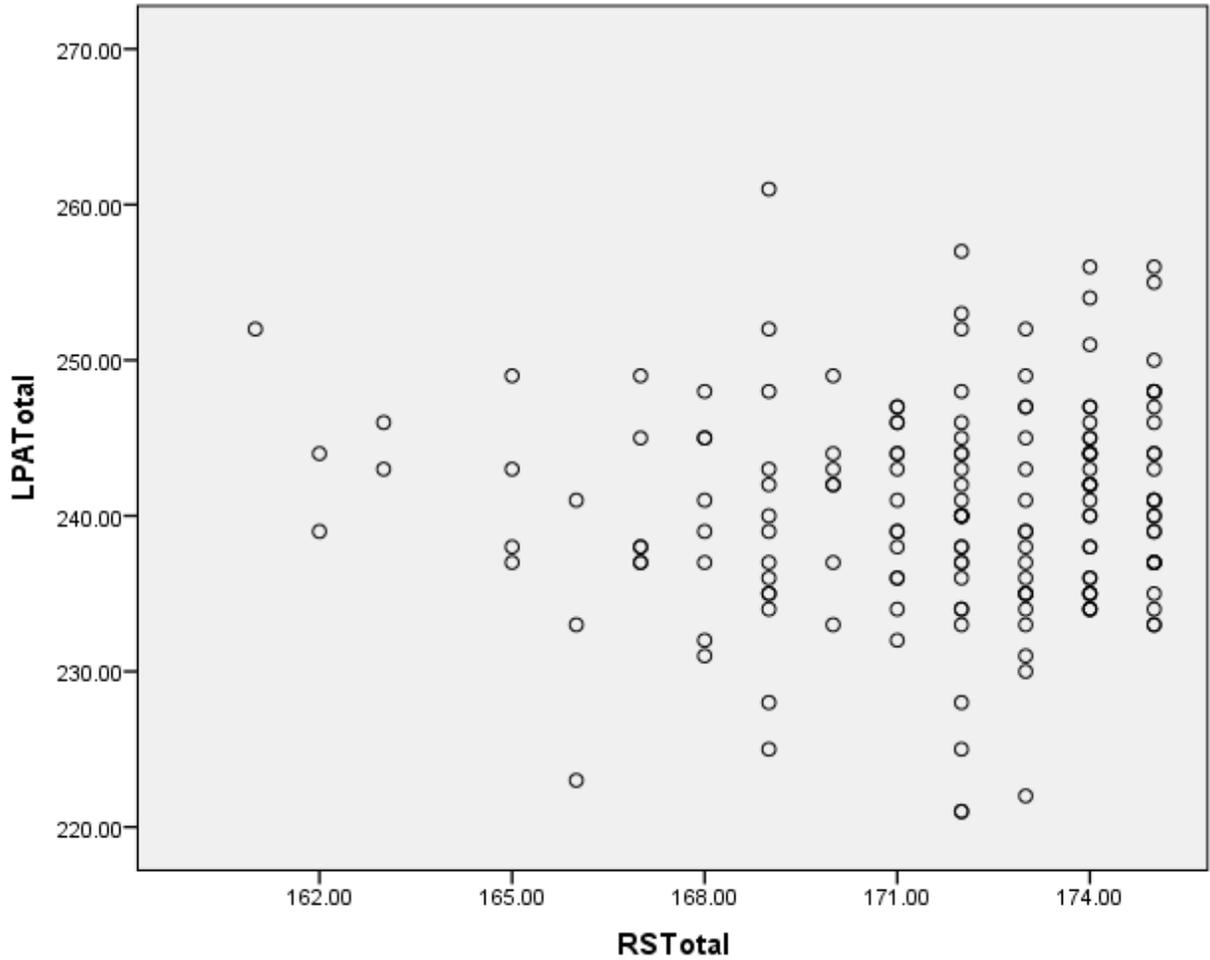


Figure 7. Scatter Plot of collective scores for the SDLRS/LPA and the RS-25

The regression equation for predicting self-directed learning readiness is:

$$\text{Predicted self-directed learning readiness} = .05 \text{ Resilience} + 231.20.$$

There is no statistically significant relationship between self-directed learning readiness and resilience ($\beta = .05$, $p = .76$). Approximately .1% of the variation in self-directed learning readiness is predicted by resilience.

Summary

This chapter concentrated on addressing the research questions and the results of the data in regards to student-athletes' self-directed learning readiness and resilience. Also, this chapter addressed the demographics of the participant sample. A one-way ANOVA was used to test differences in self-directed learning readiness and resilience by gender and sport; additionally, a linear regression was used to test the effect of resilience on self-directed learning readiness in student-athletes. The results indicated that there were no differences in self-directed learning readiness and resilience by gender and sport; furthermore, the results indicated there was no relationship between self-directed learning readiness and resilience among student-athletes.

CHAPTER 5: FINDINGS AND CONCLUSIONS, DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Chapter 1 introduced the statement of the problem, the purpose of study, the significance of study, research questions, limitations, assumptions, and definition of terms. Chapter 2 reviewed the literature which examined the adult learner, the student-athlete, an overview of self-directed learning, resilience, gender and sport participation, and an examination of the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS). Chapter 3 recapitulates the purpose of the study and the research questions. Additionally, this chapter addresses the setting and participants, procedures, and instrumentation- the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS). Reliability and validity of both the Self-Directed Learning Readiness Scale (SDLRS) and the Resilience Scale (RS) are examined, and the chapter is concluded with a description of the analysis of data. Chapter 4 focused on the research questions and the results. Chapter 5 presented the findings and conclusions, discussion, implications and recommendations for future research.

Purpose of Study

The purpose of this study was to investigate the relationship between self-directed learning readiness and resilience among student-athletes. Guglielmino's Self-Directed Learning Readiness Scale (SDLRS), was used to measure the composite beliefs, proficiencies, and attributes that encompass an individual's readiness to direct his or her own learning. Gibbons (2002) indicated self-directed learning occurs when an individual increases his or her knowledge

base due to their own efforts. Abdullah and Embi (2011) suggested self-directed learners are accountable for their own learning development and motivation to learn is vital in continuing achievement.

Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience or the ability to handle the pressures of life. The ability to positively adapt and maintain mental stability during adversity is a principle of resilience (Herrman, et al., 2011).

The needs of student-athletes coincide with the andragogical model (Knowles, 1975). These students must focus on existing responsibilities and problems and readiness to learn is dependent on the intrinsic motivation to accomplish goals (Bolton, 1985). Resilience is incorporated with Knowles (1975) andragogical model. Based on a study by Denny and Steiner (2009), intrinsic influences were more dominant than external factors to correlate with satisfaction in studies concerning student-athletes. Possessing self-directed learning abilities is imperative for the development and academic achievement of students (Deyo, 2010).

Research Questions

The following questions were used in this study:

- RQ1. What are the differences in self-directed learning readiness by gender and sport?
- RQ2. What are the differences in resilience by gender and sport?
- RQ3. What is the effect of resilience on self-directed learning readiness in student-athletes?

All the participants for this study were scholarship or walk-on student-athletes, at a large Division I southern university. All of the data collected were classified by gender and sport participation with no information to identify any student-athlete. A one-way Analysis of Variance (ANOVA) was used to measure the differences between gender and sport, with self-

directed learning readiness and resilience abilities. Linear regression was used to measure the relationship between self-directed learning readiness and resilience among student-athletes. The study indicated there were no differences in self-directed learning readiness and resilience by gender and sport; furthermore, the results indicated there was no relationship between self-directed learning readiness and resilience among student-athletes.

Conclusions

This study investigated the relationship between self-directed learning readiness and resilience among student-athletes. Guglielmino's Self-Directed Learning Readiness Scale (SDLRS) was used to measure the composite beliefs, proficiencies, and attributes that encompass an individual's readiness to direct his or her own learning. Wagnild and Young's Resilience Scale (RS) was used to measure psychological resilience. This scale was used to measure the capability one has to handle pressures of life. These assessment instruments were chosen for this study due to the practical application student-athletes could make from the surveys and the concise nature of the surveys. The instruments did not require a large amount of time; therefore, student-athletes were more willing to participate in the study. The results of this study suggested there were no differences by gender or sport in self-directed learning and resilience capabilities of student-athletes. Additionally, no relationship existed between self-direction and resilience. Essentially, this study identified student-athletes as highly self-directed and resilient. An average score for the SDLRS is 214 (Guglielmino, 2011). The means for student-athletes that completed the SDLRS were higher than an average score. The mean for men was 239.63, while the mean for women was 241.67. The means for each sport that completed the SDLRS are as follows: men's football, 240.24; men's basketball, 238.13; men's track and field, 239.47; women's track and field, 239.91; women's basketball, 243.75; women's volleyball, 242.21; women's golf,

244.67. A low score for the RS is 130 or lower and a high score is 161 or higher (Wagnild, 2010). The average mean for student-athletes that completed the RS maintained high scores. The mean for men that completed the RS was 171.27, while the average mean for women was 172.01. The average mean for each sport that completed the RS is as follows: men's football, 171.89; men's basketball, 170.60; men's track and field, 170.75; women's track and field, 171.68; women's basketball, 172.33; women's volleyball, 171.71; women's golf, 173.33. The survey results propose student-athletes are highly self-directed and resilient.

The average score for males and females SDLRS/LPA score was 240.48. The SDLRS ascertains an above average score falls between 227 and 290; furthermore, the SDLRS states the average adult score is 214. In addition, a similar tendency occurs with the RS-25. The data illustrates the average mean for males and females RS-25 score was 171.58. The RS-25 states a high score is 161 or higher. Though the statistical results did not yield statistical significance, the data suggests student-athletes are above the average adult in self-direction and resilience. The data suggests student-athletes are above average in self-direction and highly resilient; however, being highly resilient does not have any effect on the level of a student-athletes self-direction. Resilience, in this study, could not be used as a predictor of self-direction.

Discussion

The student-athletes were non-traditional learners which classified these individuals as adult learners. Additionally these learners require self-directed and resilient capabilities; moreover, self-direction and resilience utilizes intrinsic motivation and the two abilities are synonymous with student-athlete success (Chartland & Lent, 1987). The results of the study profess there are no differences between gender and sport in self-direction and resilience; furthermore, no relationship exists between self-direction and resilience among student-athletes.

However, the student-athletes within this study produced higher than average self-direction and resilience scores (according to the results of the SDLRS and RS-25). This finding agrees with the literature that it is necessary for student-athletes to possess such capabilities (Adler & Adler, 1991; Chartland & Lent, 1987; Day, Lovato, Tull, & Ross-Gordon, 2011; Sile'n & Ulhin, 2008).

There was also more male representation than females in this study. Of the participant sample, 97 were male and 69 were female. Represented in the sample group were seven varsity sports: men's football, men's basketball, men's track and field, women's track and field, women's golf, women's volleyball and women's basketball, totaling 166 student-athletes. The team group consisted of 87 student-athletes on team sports (men's football, women's basketball, men's basketball, and women's volleyball) that made up 52% of the participants. The sample population was small considering the large Division I, southeastern university consists of 19 varsity sports and not all student-athletes participated in the study.

The literature suggests student-athletes must develop holistically in order to be successful in collegiate academic settings. Due to student-athletes arriving on college campuses by various means, a support system consisting of academic counselors, learning specialists, coaches, and athletic administrators must be intact. The development of student-athletes depends upon the students' ability to become independent and resilient. According to the results of this study, student-athletes are self-directed and resilient but there no differences by gender or sport.

Implications

The results from this study will help college athletic administrators to better understand student-athletes readiness for self-direction and resilient capabilities; furthermore, this understanding will contribute to efficient and holistic student development. In addition, the

results of this study will aid individuals who work closely with these students to become successful collegiate student-athletes.

This study promotes student-athletes to truly contemplate developing as students, as well as athletes. A large number of student-athletes attend college with the expectation of becoming professional athletes. According to Adler and Adler (1991), collegiate athletes struggle to maintain equality between academics, athletics, and social activities. The need for development is vital for college student-athletes to become successful in the academe and life after college. Deyo (2010) suggested that encompassing self-directed learning abilities is imperative for the development and achievement of students; however, student-athletes cannot accomplish this feat without systematic assistance and support (Gaston-Gayles, 2003). Silén and Uhin (2008) proposed self-direction as critical aspects connected to students' responsibility and independence in learning. This is possible when athletic departments collaborate with student-athletes to create a learning environment to better educate and develop the student.

An additional issue student-athletes contend with is role conflict between student and athlete. Chartland and Lent (1987) suggested student-athletes are challenged with role conflict when one of their dual roles usurps the other. Moreover, when student-athletes participate in intercollegiate athletics as a means to become a professional athlete, the role of student is deemed less important (Sack & Thiel, 1985). According to Chartland and Lent (1987), the demands of athletics cause problems for the maturation of student-athletes; moreover, the problems these students have are time management and study skills problems, inadequate career and social development prospects, and a limited self-evaluation (Lanning, 1982). Athletic departments assume responsibility of developing student-athletes holistically; therefore, athletic departments must attempt to aid the student-athlete in the maturation process.

Understanding student-athletes role as a non-traditional learner will allow athletic departments to use andragogy principles. The students' interest and objectives can be tailored in order to accomplish their goals; moreover, by involving the student in the educational process, self-awareness and confidence are elevated (Chan, 2010). Russell (2006) indicated adult learners apply internal motivation and previous experiences in order to accomplish educational goals. Many adult learners, like student-athletes, have various obligations beyond an educational context; therefore, modifying the educational experience to fit their needs is vital. Student-athletes are adult learners that have a high demand on their time and these learners have significant issues to contend with beyond academics. Due to student-athletes having authoritarian rules from the NCAA, student-athletes must also contend with:

Student-athletes must complete 40 percent of the coursework required for a degree by the end of their second year. They must complete 60 percent by the end of their third year and 80 percent by the end of their fourth year. Student-athletes are allowed five years to graduate while receiving athletically related financial aid. All Division I student-athletes must earn at least nine credit hours each term to be eligible for the following term and must meet minimum grade-point average requirements that are related to an institution's own GPA standards for graduation. (NCAA, 2011)

The rules of the NCAA are an additional responsibility student-athletes must develop self-directed and resilient skills in order to adequately attain a college degree and uphold an agreement made to the University to perform at a high level athletically.

In addition to athletic departments developing student-athletes, university campuses could additionally aid in the holistic development of student-athletes. These non-traditional students can benefit from mentors on college campuses. Mentorship can come by way of

professors and administrators. The academe and athletic departments should collaborate more frequently to better serve the non-traditional student-athlete population. Other Division I universities have mentor programming that acts as liaisons between student-athletes and the academe such as Ohio State University, Pennsylvania State University, and University of Virginia (Pfister, 2004). Creating meaningful relationships with college administrators, professors, and athletic coaches can create an environment that will assist student-athletes. These types of relationships can be better than the previous interactions and backgrounds these non-traditional learners may have experienced.

Recommendations for Future Research

There is a lack of research about student athletes' self-directed learning readiness and resilience abilities. Self-directed learning has been researched by many adult education practitioners and numerous models have been established (Brockett & Hiemstra, 1991; Brookfield, 1984; Garrison, 1997). In addition, resilience has been investigated with focuses such as gender, socio-economic status, and race (Borowsky, 2004; Howard, 1996; Ireland, 2004; Resnick, 2004; Wang & Gordon, 1994; Wang, Haertal, & Walberg, 1996). The deficiency of research in this area merits further investigation into understanding the relationship between gender and sport participation and their self-directed learning readiness and resilience. Understanding student-athletes readiness for self-direction and resilient capabilities will contribute to efficient and holistic student development; additionally, the results of this study will aid individuals who work closely with these students to become successful collegiate student-athletes. A recommendation for further research would be to use a larger sample size and to compare the results from the SDLRS and RS-25 with general college students. Another

recommendation for further research would be to compare the results from SDLRS and RS-25 with undergraduate students and graduate students.

An additional means for research would be to use a university that is not located in the southern region of the United States. Examining the results of assessments from individuals from other regions of the United States could serve useful for data collection. In addition, compare assessment results from multiple regions of the United States and include more varsity athletic sports such as Field Hockey, Men's Ice Hockey, Men's Lacrosse, Men's Soccer, Women's Ice Hockey, Women's Lacrosse, and Women's Soccer. An additional means of research that may be useful would be to compare small and large universities. Does the lack of funding and student-athlete development services in Division II universities affect self-directedness and resilience in student-athletes at Division I universities? Do smaller universities put the same emphasis on student-athletes turning pro and does this emphasis affect student-athlete self-directedness and resilience. This direction with the research may offer more variance in the type of student-athletes that complete the surveys. Additionally, a new study could compare student-athletes beliefs about self-direction and resilience from different backgrounds. The proposed diverse backgrounds for comparison would include single-parent households to two-parent households, low socio-economic status to high socio-economic status, and African American student-athletes to Caucasian American student-athletes.

The level of resilience and self-direction a prospective student-athlete possess can be utilized for recruiting. When student-athletes come for official and unofficial visits to college campuses, assessments like the SDLRS and the RS-25 can be given to understand the level of self-direction and resilience a student-athlete has. This could help athletic departments decide whether or not to recruit certain student-athletes. Athletic departments that recruit highly self-

directed and resilient student-athletes have a better chance of these students securing their eligibility yearly. Additionally, student-athletes that are highly self-directed and resilient make for better students on college campuses and more coachable athletes in their specific sport. By assessing the level of self-direction and resilience before recruiting, athletic departments lower the risk of putting a student-athlete on scholarship that is not prepared to handle the rigor of college and sport.

College athletic departments have a responsibility of educating faculty and staff on college campuses about the dual roles of student-athletes. When many student-athletes attend college, they are prepared to compete in the classroom and on the athletic field; however, competing with public opinion on college campuses is a factor that student-athletes rarely are prepared to face. Resilient capabilities allow student-athletes to handle the pressures of scrutiny from uneducated peers and faculty on college campuses about their roles on campus. When student-athletes have high resilient capabilities and self-direction, the unfair pressure of winning on the athletic field will not deter the goals set by the student. The problem student-athletes face is the lack of support academically by the public and the abundance of support in athletics. Student-athletes that are highly self-directed and resilient compensate for the misplaced support that the public puts on athletics. The student-athlete is able to compensate because they are intrinsically motivated to accomplish their goals and will accomplish these goals despite any adversities they endure. Self-directed and resilient student-athletes should be the type of individuals athletic departments pursue as representatives for their universities.

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