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Grit, Student Engagement, and Academic Performance at a Historically Black Community College

Sharonica Marie Nelson
Walden University

Walden University

COLLEGE OF EDUCATION

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Sharonica Marie Nelson

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Dr. Beate Baltes, Committee Member, Education Faculty
Dr. Michelle Brown, University Reviewer, Education Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University
2016

Abstract

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MA, Jacksonville State University, 2011

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Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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December 2016

Abstract

Obtaining a college degree benefits individuals and society, yet only 20% of students are graduating from community colleges. At many institutions, graduation rates have decreased over the last five years, including one historically Black community college in the southern United States. To explore possible causes of low graduation rates at this unique and understudied type of college, this correlational study examined the relationships among student engagement, academic performance, and grit—persistence and passion toward long-term goals. Tinto's theory of student persistence served as the theoretical framework for this study. The convenience sample included 116 college students who already had a first-year grade point average (FYGPA). Grit was measured by the Grit-Short Scale; student engagement by the Student Engagement Instrument-College, and academic performance by FYGPA. No statistically significant relationships were found between grit and academic performance, or between student engagement and academic performance, however. Recommendations included additional research with larger samples of students and other HBCUs. Recommendations also included exploring other non-cognitive constructs, such as academic mindsets, learning strategies, socials skills, and academic behaviors to understand those relationships with academic performance. Implications for positive social change include providing initial research findings to the college administration for continued research on efforts toward producing more graduates, thereby increasingly providing quality higher education to underserved groups of students.

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Dedication

Muhammad Ali once said, "It's the repetition of affirmations that leads to belief. And once that belief becomes a deep conviction, things begin to happen." I said I wanted a doctorate, I believed I could achieve it, so I called myself doctor. It has happened. For this, I am grateful and humbled. Therefore, this is dedicated to my husband, daughter, and father for their undying belief in me. Thanks for the prayers, motivation, and help. Toney, you're the best. Kamil, I did this for you. To my father, William L. Bell, thank you for always reminding me that the sky is the limit.

Acknowledgments

I would like to thank Dr. Nicolae Nistor, Dr. Beate Baltes, and Dr. Michelle Brown for their guidance. To the rest of my family and friends, thanks for the encouragement and the prayers. Lastly, but certainly not least, thanks to my heavenly Father for carrying me when I could not go on. "If God be for you, who can be against you?"

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Section 1: Introduction to the Study

Introduction

Nationwide, the graduation rates of many colleges are low (Hillman & Orians, 2013). Many students are not graduating with degrees at the rate in which they are enrolling in tertiary institutions to obtain them. It is a widespread problem, and leaders of higher education and secondary education institutions and districts, policymakers, and legislators are searching for ways to improve college student academic performance and graduation rates (Rath, Rock, & Laferriere, 2013).

There are many traditional predictors of college graduation (Cromwell, McClarty, & Larson, 2013). Cognitive ability instruments, such as the American College Test (ACT), Scholastic Aptitude Test (SAT), and high school grade point averages (HSGPA), are typically used as college academic performance predictors for entering college students. College students' academic performance regarding grade point average (GPA), and particularly first-year GPA (FYGPA) and course grades, are predictors of college graduation. Yet, recent research attention has turned to what are often termed *non-cognitive constructs* and their importance to academic performance, such as student attrition, intrinsic and extrinsic factors in student motivation, student self-efficacy, and college support services in relation to college academic performance and persistence to graduation.

One such non-cognitive construct is *grit*, which has been defined as persistence and passion toward long-term goals (Von Culin, Tsukayama, & Duckworth, 2014). It must be noted that persistence and grit are synonymous (Chien, Harbin, Goldhagen,

Lippman, & Walker, 2012; United States Department of Education, 2013). Grit is a construct coined by Duckworth, Peterson, Matthews, and Kelly (2007) that has evolved to include ideas of self-discipline, determination, and perseverance regardless of obstacles. Empirical research by Perkins-Gough and Duckworth (2013) indicated that a relationship exists between grit and higher academic achievement. According to Strayhorn (2013), research concerning grit has not been conducted at historically Black colleges such as Wilson State Community College (WSCC; a pseudonym), a small historically Black community college in the southern United States. Therefore, this research was needed.

Another non-cognitive construct that has garnered much attention in the past is student engagement and its impact on academic performance. The term *student engagement* is conventionally defined as students' involvement in practices that positively affect their academics whether inside or outside of the classroom (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007). Appelton, Christenson, Kim, and Reschly (2006) suggested that engagement is multi-dimensional and overlaps other constructs. Appleton, Christenson, and Furlong (2008) identified three components of engagement which they delineated as affective, behavioral, and cognitive.

Student engagement is a robust research area, and failing to understand student engagement in terms academic performance improvement brings dire consequences (Claxton, 2007; Gilbert, 2007; Taylor & Parsons, 2011). However, I identified a need to understand student engagement, grit, and academic performance in a single study. Therefore, I designed this study to probe the potential relationships between the

aforementioned variables in a particular institutional context (Duckworth et al., 2007; Von Culin et al., 2014).

In the following paragraphs, I provide the problem statement, the rationale, and the significance. This section closes with a brief summary of the implications of the study, and the finally closes with the limitations of the study and a brief summary. In Section 2, I review the literature, which describes all of the variables. In Section 3, I provide the research methods. In Section 4, I provide the Results. In Section 5, I discuss the findings in detail.

Problem Statement

The problem I investigated in this study was low graduation rates for students at a historically Black community college. Nationally, community college graduation rates are declining (Talbert, 2012). In the school year that ended in 2014, the graduation rate was 10% at WSCC (National Center for Education Statistics [NCES], 2014b). Since 2010, WSCC administrators have taken steps to improve graduation rates; however, graduation rates have continued to decline (see Table 1; NCES, 2014a). In addition to declining graduation rates, there has been a 20% decrease in student retention (NCES, 2014a). Retention and graduation problems also constitute a national challenge as student retention problems and high dropout rates have been and remain a dilemma for many institutions (Brown, 2012; Cavendish, 2013). On the national level, decreases in student retention and graduation rates have compelled efforts to promote college readiness and better prepare students for college (Arnold, Lu, & Armstrong, 2012b; Nagaoka et al.,

2013). Table 1 shows NCES retention and graduation rate data from 2010 to 2014 at my study site.

Table 1

WSCC Retention and Graduation Rates between 2010 and 2014

Year	Retention (%)	Graduation (%)
2014	50	10
2013	48	17
2012	57	17
2011	53	17
2010	54	22

Note. Retention and graduation percentages. Adapted from "IPEDS Data Feedback Reports." Retrieved from National Center for Education Statistics. (2010-2014). Graduation and Retention Rates.

Table 1 shows that retention rates fell from 54% in 2010 to 50% in 2014. This table also depicts how graduation rates fell from 22% in 2010 to only 10% in 2014. In sum, graduation rates dropped significantly.

Nature of the Study

Higher education policymakers, institutions, and many secondary education districts nationwide are searching for ways to improve college student success. Past researchers have, for example, explored student attrition, intrinsic and extrinsic factors, self-efficacy, and college student support services in relation to college student success. WSCC needs to know how to improve student success by examining other non-academic constructs that contribute to student success and academic performance, including grit and student engagement. More detail will be provided concerning the research design approach in Section 3 to further explain this correlational, quantitative study. In this study, I addressed the following two research questions and hypotheses:

Research Question 1: What is the relationship between student engagement scores as measured by the Student Engagement Instrument-C and academic performance as measured by FYGPA at WSCC?

H1$_0$: There is no statistically significant relationship between Student Engagement Instrument-C scores and academic performance as measured by FYGPA at WSCC.

H1a: There is a statistically significant relationship between Student Engagement Instrument-C scores and academic performance as measured by FYGPA at WSCC.

Research Question 2: What is the relationship between grit scores as measured by the Grit-S instrument and academic performance as measured by FYGPA at WSCC?

H2$_0$: There is no statistically significant relationship between Grit-S scores and academic performance as measured by FYGPA at WSCC.

H2a: There is a statistically significant relationship between Grit-S scores and the academic performance as measured by FYGPA at WSCC.

Purpose of the Study

The purpose of this correlational study was to examine the relationships between grit, student engagement, and academic performance as measured by FYGPA. I examined the relationships between these variables to better understand decreasing graduation rates. The two independent variables were grit and student engagement, and the dependent variable was academic performance.

President Obama recently implemented college completion reform, especially targeting the community college (The White House, n.d.). However, graduation rates at community colleges have not increased (Wyner, 2012). The President's goal caused

intensified college completion reform efforts at many different levels ranging from

federal agencies to individual institutions, and especially community colleges (The White

House, n.d.). Community colleges have an important role in academically preparing

students for both workforce and further educational goals (Martin, Gallentino, &

Townsend, 2014; Wyner, 2012). Further, community colleges enroll over 40% of all

undergraduates nationwide. However, community colleges graduate only 20% to 25% of

those enrolled (Hillman & Orians, 2013). Table 2 compares WSCC rates with the

national community college graduation rates.

Table 2

Low Graduation Rates of WSCC and Community Colleges Nationally by Year

Year	WSCC (%)	Community Colleges Nationally (%)
2010	22	23
2011	17	22
2012	17	21
2013	17	21
2014	10	20

Notes. Graduation Rate percentages. National Center for Education Statistics. (2014a). Two-year college graduation rates. Retrieved from https://nces.ed.gov/programs/digest /d13/tables/dt13_326.20.asp

As indicated in Table 2, graduation rates at WSCC have decreased over the last

few years by 55%. WSCC rates went from 22% in 2010 to 10% in 2014. Nationally,

community college graduation rates dropped from 23% in 2010 to 20% in 2014. Table 3

depicts the percentages of WSCC students passing courses with a C or better.

Table 3

WSCC Academic Performance Student Course Completion Percentages by Year

	2010-2011	2011-2012	2012-2013	2013-2014
*Success	73	73	75	73
Non-Success	21	18	16	18

Note. *Success defined as C or better.

As can be seen in Table 3, most students passed with a C or better, but this does not correspond with the low graduation rates of the college. Despite positive course pass rates at WSCC, too few students are graduating. Gayles (2012) found that successful FYGPA, C or better, was a predictor of graduation. However, graduation rates of WSCC students do not correspond with student academic performance. Although most students are passing courses, the majority of them are not graduating.

Theoretical Framework

The theoretical framework for this study was Tinto's (1973, 1982) student retention theory. Facets of the theory are pertinent to grit and student engagement while also addressing the problem of non-graduating students at WSCC. Tinto (1973) posited that the level of goal commitment or persistence was central to students' decision to drop out of higher education. However, Tinto (1982) acknowledged that other factors may also play a role in students dropping out, such as financial issues and other external factors that students face. Tinto recognized these limitations to the initial theory of student dropout. The author also conceded that the initial model of student retention did not account for student disengagement. Tinto's (1973) study of persistence and its influence on college completion, and his acknowledgement of student engagement and its influence on dropping out became the underpinning of this study. Student engagement and grit

have both been identified as non-cognitive influences of student academic performance in terms of degree completion.

I derived the framework for this study from Tinto (1993) who, using student retention theory, proposed that college success can be attributed to a student's previous academic and social experiences, reasons for attending college, goal commitment level, and interaction with the college environment. Embedded in Tinto's discussion of goal commitment level was the notion of grit, which is defined as persistence and passion for long-term goals (Duckworth & Quinn, 2009). In essence, grit signifies the level of goal commitment because grit encompasses goal commitment.

Further, Tinto's discussion of students' interaction with the college environment encapsulates the notion of student engagement, which is defined as the time and effort students invest in their studies and other educationally-focused activities in college (Perrotta & Bohan, 2013; Tinto, 1993). Therefore, I chose this framework to better understand the variables of grit, student engagement, and academic performance at the local setting, WSCC.

Operational Definitions

Academic Performance: How well a student performs in academic knowledge and skills, which is reflected by the student's cumulative GPA (Al-Hattami, 2012).

Grade Point Average (GPA): A calculated cumulative mean measure of students' academic performance based on their grades in all courses they have matriculated in college (Merritt, 2016).

Grit: A term appropriated to denote trait-level perseverance and passion for long-term goals measured via the grit instrument (Chien et al., 2012; Duckworth et al., 2007).

Retention: Keeping students in college until they graduate (Brooks, Jones, & Burt, 2013; Tinto 1993).

Student Engagement: The effort, both in time and energy, students give to educationally-purposeful activities (expectations, student services, and extracurricular activities) which encourage students to engage in such practices; measured via student engagement instruments (Kuh, 2001; Tinto, 1993).

Student Success: A student's achievement of his or her educational goals and attainment of key performance milestones in a timely manner (California Postsecondary Education Commission, 2011).

Assumptions, Limitations, Scope, and Delimitations

Assumptions

The first assumption I made was that all students would complete the surveys (Short-Grit, Student Engagement Instrument-College) to the best of their abilities. Both surveys were combined into one, including a short demographic questionnaire, and participants had to complete the survey in its entirety. I assumed that students would follow directions and complete the survey by choosing the best answer choice based on their feelings concerning the questions. My second assumption was that students would accurately self-report FYGPA.

Limitations

One limitation of this study was that students self-reported FYGPAs. It is possible that students did not accurately self-report their FYGPA. Second, this study purposefully omitted the study of other constructs that frequently influence college students' academic success such as motivation, self-efficacy, and emotional intelligence.

Finally, the application of scale measures may serve as a study limitation. Likert-type scales are normally considered ordinal measures. In this study, I analyzed the Likert-type scales as interval measures, Grit-S and SEI-C (Lavrakas, 2008). This was done so that parametric statistical procedures could be used to analyze results. Grit-S and SEI-C were analyzed as scales with response items that are equal distances apart. From a statistical standpoint, this suggests an interval level of measurement (Harpe, 2015).

For the purpose of this study, I used both instruments individually and in their entirety to determine the level of the phenomena of interest: grit and student engagement. It would have been inappropriate methodologically and statistically to analyze each response item; therefore, each instrument was analyzed as a composite and scored as prescribed by the developers of each instrument (Harpe, 2015). These composite scores represent grit and student engagement and were analyzed in relation to academic performance.

Scope

As previous researchers of college academic performance have suggested, it was important to the local and broader context of the problem to understand the impact of grit on student success and academic performance at WSCC. Strayhorn (2013) has called for

grit research at a historically Black college or university (HBCU). Therefore, I limited this study to the grit and engagement of participants who were current students at WSCC. Greene, Mari, and McClenney (2008) similarly called for study of the engagement of African American students a community colleges. However, given the small number of participants and no other institution to cross-check results, this study is only generalizable to WSCC.

Delimitations

To avoid Family Education Rights and Privacy Act (FERPA) violations, I decided to obtain self-reported FYGPA from all participants. WSCC reserved the right to withhold identifying information or information potentially damaging of its stakeholders. Therefore, to stay within the parameters of this study and respect the rights of the institution, I omitted explicit data concerning graduation and student FYGPA generated directly from the college. Omitting this information did not diminish the quality of this study.

<div align="center">

Significance of the Study

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The original contribution this study made at WSCC was to view and address academic performance through a new and different lens, that of grit, engagement, and academic performance. Moreover, the college itself may benefit from evidence of other constructs that could enhance efforts to make the campus a place where more students are retained and eventually graduate. WSCC benefits by having insight into which concepts correlate to success—insight that administrators might use to allocate existing retention resources more effectively (see Al Ghanboosi & Alqahtani, 2013).

The study will also benefit higher education stakeholders by uncovering evidence of the relationship between grit, student engagement, and academic performance at an HBCU (Strayhorn, 2014). Findings may benefit historically Black community colleges by providing insights regarding trends that better predict success. This insight could allow administrators to allocate existing retention resources more effectively (see Al Ghanboosi & Alqahtani, 2013).

This study is also shows the positive relationship between quality of life and college education (see An, 2013; Castro, 2013). Most students at WSCC are minority, low-income, and non-traditional students. Research findings have demonstrated that individuals with higher education degrees are less likely to rely on government assistance and more likely to enjoy a better quality of civic life (Castro, 2013; Dickerson, 2004). Therefore, it is important that WSCC students earn a college education. Earning a college education is an undertaking that will require students to obtain adequate non-cognitive skills and preparation to ensure college success. The improvement of college student success skills will likely improve college graduation rates, and, in turn, result in a better quality of life for more WSCC students.

Summary

In this section, I described the problem which prompted the study and previewed the research questions and hypotheses that guided the study. A purpose statement was provided along with the theoretical framework that established grounding for the overall research. Operational definitions explained special terms needed to understand the parameters of this study. In the next section, I will review and interpret the available

literature regarding the variables of grit, student engagement, and academic performance, as well as any research-based relationships between these variables. The content of the remaining sections of the study includes the research method section, which includes a description of the research design and approach. The results section included the pertinent information concerning overall data analysis, and the final section of the study includes discussion, conclusion, and overall recommendation for further study.

Section 2: Literature Review

Introduction

Nationally, stagnant college graduation rates, gaps in persistence, high dropout rates, and poor retention among community colleges have prompted the review of these issues to create a more educated society. McCormick and McClenney (2012) argued that there is broad consensus that U.S. higher education needs to do a better job because too many students enter college and never graduate. Bodies of research show that academic qualities are not the only indicators or influencers of student success.

The American College Test ([ACT], 2007) found that academic discipline (i.e., adhering to deadlines, using time wisely) strongly influences GPA. Student academic discipline encompasses student behaviors outside of cognitive ability such as commitment and self-management (Sommerfeld, 2011). Markle and Robbins (2013) suggested that as institutions seek to increase student success, they must first gain a better understanding of the broad set of factors that can help or hinder their students. These factors include non-academic constructs such as student engagement and grit.

The purpose of this literature review is to discuss grit and student engagement as they relate to academic performance as measured by FYGPA. In the literature review, I provide details concerning: the theory that underpins this study, grade point averages, grit, student engagement, and other concepts and factors that influence success. To gather relevant sources to review, I searched the following databases: Academic Search Complete, Education Research Complete, ERIC, InfoSci-Online, PsycArticles, and ProQuest Central. The following keywords were used to search these databases: *college*

retention, college student success, student engagement, grit, cognitive predictors of success, community college success, community college retention, academic performance, non- predictors of college success, college persistence, and *student involvement.*

Tinto's Theory of Student Retention

Tinto's (1973, 1987) theory of student retention has had several names including "theory of student departure," "integration theory," and "interactive model of student departure." However, in 2012 Tinto solidified the name of this theory by referring to it as the theory of student retention. Given the theory's roots spanning over two decades and the accolades, criticism, and scrutiny it has received, the theory of retention is known as a foundation for student engagement and student retention. Tinto's theory of retention is one of the most widely used, studied, and cited frameworks concerning student retention (Pascarella & Terenzini, 2005). The foremost reason Tinto's theory has found such widespread use is because it openly examines the relationships between students and their college experiences, and focuses on how to make these interactions better. Tinto (1973) used four existing surveys to support the theoretical work: (a) National Longitudinal Study, (b) High School and Beyond, (c) American College Testing Program Survey of Institutions, and (d) Survey of Retention at Higher Educational Institutions (Tanaka, 2002).

As this theory has been extensively studied, some researchers have pointed out its deficits, and have argued that Tinto's theory ignored students other than White, 4-year college students. For instance, Pascarella and Terenzini (2005) argued that the theory

cannot be applied across races and ethnicities. Tinto's (1975) theory emphasized the concept of integration as a key to increasing student retention regardless of race or gender. The author essentially contends that students of all races and ethnicities must be academically and socially integrated, or have a strong sense of belonging to the institution.

Braxton, Hirschy, and McClendon (2004) concluded that out of 40 studies, 19 did not show a link between persistence and Tinto's idea of academic integration. However, the main focus of Tinto's (1975) theory is that increased student levels of commitment to the institution stem from increased levels of social integration. Further, increased levels of student academic integration result in increased commitment to degree attainment. Therefore, Tinto urged that both institutional commitment and student commitment to degree attainment result in increased grit (the main variable in this study), and that grit and persistence are synonymous. Tinto (1987) presented six principles of institutional action that help promote social integration, student commitment, and student engagement; these principles are discussed below.

Principle I. Tinto (1987) suggested that institutions must ensure that new students enter with or have the opportunity to acquire skills needed for academic success. Some institutions are highly selective and screen students for academic success skills to ensure that they enter academically astute and possess the skills needed to be successful. Other institutions provide developmental courses to ensure that students have an opportunity to acquire the necessary academic skills to successfully complete a college degree.

Principle II. Tinto (1987) suggested that institutions should reach out to students beyond the classroom by making connections, fostering relationships, and creating opportunities for student support beyond the classroom setting. Some schools mandate that instructors engage students through calls or regular email communications. Other schools require instructors to maintain regular office hours where students may have one-on-one instructional support time outside of the classroom with the faculty.

Principle III. Tinto (1987) suggested that institutional retention actions should be systematic. Retention actions and the plan of implementation should include established goals for retention improvement and checkpoints for meeting goals. Institutions must also coordinate retention strategies, and these efforts must be consistent throughout departments, schools, and classrooms.

Principle IV. Tinto (1987) argued that institutions should start early in an effort to retain students. Retention strategies should include frequent student meetings with academic advisors. Advisors must use these meetings as opportunities to check on student progress, concerns, and academic achievement. First-year programs are important because they prepare and initiate the tracking of student progress.

Principle V. Tinto (1987) recommended that the main commitment of institutions must be their students' needs and success, and that institutions must be learner-centered. Learners are the reason institutions exist; without students, there is no one to engage in learning. Moreover, the institutional focus should be on student progress and achievement. Focus must not solely be attracting resources or reputation for the

institution. Rather, the focus must be on student progression for the purpose of degree attainment.

Principle VI. Tinto (1987) suggested that education should be the goal of retention programs. Retention programs must be concerned with providing students with the opportunity of a quality education and ensuring that they progress toward degree completion.

These six principles are also important to student engagement because academic integration, student engagement, and student integration are all related. In 1993, Tinto included more focus on minority students, nontraditional students, and the classroom. In addition, the author proposed the following seven principles of instructional effectiveness.

Principle I. Tinto (1993) argued that institutions must provide resources for program development and professional development for faculty and staff. Faculty and staff cannot be expected to automatically know their roles pertaining to student engagement and academic integration. The institution should provide professional development and empowerment to faculty and staff so that they know the significance of engagement and integration and the critical roles they play regarding school-wide decisions concerning students. There must be buy-in from all faculty and staff to create a unified front pertaining to student engagement and academic integration of the students.

Principle II. Tinto (1993) suggested that institutions must be committed to the long-term process of program development. Schools must be active in ensuring the improvement of programs that directly influence student academic performance. Most

institutions of higher education are governed by an accrediting body. Many of these accrediting bodies mandate that institutions develop a quality enhancement plan to ensure they are continuously improving in certain areas of development. Adhering to and improving based on a plan shows a commitment to program development.

Principle III. Tinto (1993) proposed the idea that institutional change must be in the hands of those who will implement the change. Principal leaders must develop collegiality among faculty and staff. Leaders must empower those who directly influence students in order for institutional change to take place. Leaders are charged with setting high morale among others, and they should also clearly convey goals and provide subordinates with the tools they need to reach these goals.

Principle IV. Tinto (1993) argued that institutional actions must be collaborative and system-wide. Faculty and staff must work together across colleges, departments, and disciplines to ensure college conditions are conducive to student success. No one department or school has all the answers, and students may be better served when departments collaborate effectively to eradicate problems or to ensure a smooth transition for students.

Principle V. Tinto (1993) argued that faculty and staff must have skills needed to assist and educate their students. They must be well-educated and have the experience needed to effectively aid students. Faculty must work in their areas of expertise and training. Faculty and staff must also have the soft-skills needed when dealing with students including patience, understanding, organization, and a collaborative mind-set.

Principle VI. Tinto (1993) recommended that institutions frontload their efforts of student retention. To retain students and create better academic performance in terms of graduates, institutions may implement progress monitoring systems to communicate student standing. They may also implement orientation courses where students are taught non-cognitive skills and college survival skills.

Principle VII. Tinto (1993) advocated for assessment that is continuous and focused on improvement for the institution and programs. Many institutions administer surveys to assess programs, instructors, and the institution as a whole. It is important that these survey results be used in improvement efforts for the sake of providing the best atmosphere possible for increased academic performance.

In 2012, Tinto published an updated theory of retention, which builds upon earlier ideas concerning grit, student engagement, and academic performance. As retention continues to be a widely studied area of higher education, Tinto recommended that the classroom is where all efforts should be targeted. The author focused on helping students graduate by way of expectation, support, assessment feedback, and involvement.

Further, Tinto indicated that institutional influences play a role in the level of student engagement, grit, and overall academic performance. Kuh, Kinzie, Buckley, Bridges, and Hayek (2006) argued that the focus of retention efforts should be on student engagement. The authors asserted that student engagement embodies certain facets of student behavior and performance that institutions may directly influence, instead of factors and characteristics that are outside of institutional or even student control. These facets include financial stressors, family and cultural background, and socio-economic

dynamics. Nevertheless, Tinto contends that grit and persistence, as non-cognitive factors in conjunction with student engagement, are related to academic performance and degree attainment.

Grade Point Average as Academic Performance

For decades, grades have been used by schools and institutions to monitor and gauge student academic performance. GPA is a summative criterion measure of students' overall academic performance. For example, Gayles (2012) found that GPA was a significant predictor of student persistence toward degree completion. Al Ghanboosi and Alqahtani (2013) observed that students with GPAs lower than 2.0 had higher dropout rates. High school GPA has also been reported to be a reliable predictor of college dropout (Al Ghanboosi & Alqahtani, 2013).

However, even students with higher high school GPAs drop out of college for reasons other than academic performance such as frustration, low self-esteem, or lack of support. Daley (2010) argued that the many causes of dropping out are complex and range from poverty, poor reading skills, weak or non-existent support systems, and an insufficient education system in the formative years. Bakoban and Aljarallah (2015) found that students who were involved in extracurricular activities had higher GPAs than did those who were not involved.

Merritt (2016) argued that the GPA system was the best system to use for measuring students' academic aptitude and future academic progress. In the United States, GPA is scored by assigning numerical values to letter grades using a point system. In a point system A = 4, B = 3, C = 2, D = 1, and F = 0 (Merritt, 2016). One concern

regarding the validity of GPAs is grade inflation, the increase in students' grades and GPAs over time without an associated achievement increase (Merritt, 2016). An additional concern related to self-reported GPA is that students may over-estimate it when asked to self-report their GPA (Komarraju, Karau, Scmeck, & Avdic, 2011).

Nevertheless, GPA has been found to be a significant predictor of college academic performance. Cromwell et al. (2013) identified that FYGPA and cumulative GPA predict degree completion, which is the overall goal of college attendance. Cabrera, Nora, Terenzini, Pascarella, and Hagedorn (1999) found that among White and Black students who participated in the National Study of Student Learning, academic performance, in terms of GPA, directly influenced college persistence. Through a sample provided by NCES, Ishitani and DesJardins (2002) noted that students with higher GPAs were less likely than those with lower GPAs to drop out of college.

Steele-Johnson and Leas (2013) studied the importance of race and gender in predicting academic performance at a Midwestern university. These authors determined that gender was not a significant predictor of GPA, but race was. In a different study concerning medical students, Kruzicevic et al. (2012) observed that high school GPA was correlated to college GPA. Therefore, students' high school academic performance, college GPA, and race, depending on the institutional context, correlates to college academic performance.

Grit

Grit is the tendency to sustain interest in and effort toward long-term goals; it is synonymous with persistence (Duckworth et al., 2007). Hoerr (2012) insisted that grit

was a quality that was necessary to success but too often overlooked. Similarly, Levy and Steele (2011) described *gritty* people as individuals who sustain effort and concentration over many years despite disappointments, failures, and hardships striving toward their goal. The gritty individual characteristically does whatever it takes to finish tasks at hand and pursues long-term goals. Recent research has been directed toward grit and its influence on student success. Researchers have sought to bring grit into the forefront and understand its importance to student success (Chang, 2014; Duckworth et al., 2007; Strayhorn, 2013).

For instance, Chang's (2014) study addressed the theory of grit in a quantitative study similar to the current one. The author found that students with higher perseverance had higher FYGPAs; however, grit was not a significant predictor of first-year academic performance. Chang acknowledged that there was limited generalizability because the study was conducted at a highly selective university where most students are expected to be academically successfully. This was the expectation regardless of the grit level.

Strayhorn (2013) studied grit among Black males at predominantly White institutions (PWIs) in a quantitative study similar to the current study. Study findings showed that African Americans who exerted more grit than their peers earned better grades. The results of this retrospective study demonstrated that grit was positively associated with grades for African Americans at PWIs, Whites, females, and adolescents. This study was important to grit research because studies had not previously focused on HBCUs or African Americans (Strayhorn, 2013). Finally, Strayhorn suggested that grit research be performed with college students at HBCUs to extend grit research even

further beyond traditional students at PWIs. The results from Strayhorn's research affirmed the assertion of Duckworth et al. (2007) that grit positively predicts academic success in challenging domains more than talent alone.

Research has recently focused on grit and its relation to student success. Duckworth et al. (2007) provided empirical research on grit, describing grit as persistence and passion for long-term goals. Duckworth and Quinn (2009) found that grittier West Point military cadets were less likely to drop out from the curriculum. The authors further noted that grittier Scripps National Spelling Bee competitors were more likely to advance into further rounds.

Cross (2014) determined that grit was significantly related to GPA in a study of doctoral student grit scores and student success. This preliminary research on grit implicated the importance of grit in relation to educational attainment (Duckworth & Quinn, 2009; Ray & Brown, 2015; Rojas, Reser, Usher, & Toland, 2012; Strayhorn, 2013). However, this research did show small advancements concerning grit. This is important as research on grit is limited. Finally, grit, although a relatively new concept, is continuing to gain momentum.

Hoerr (2013) recommended that educators teach grit since it is a quality that can be taught rather even though it can be an inherent trait for some. Teaching grit could help more students stay in college. Skills associated with the grit construct may even be taught in an orientation course as a skill to be successful in college.

Student Engagement

The concept of student engagement is based on the constructivist idea that learning can be influenced by how students partake in activities that are deemed important to their academics. Therefore, student engagement encompasses the level that students engage in a wide array of academic activities that lead to more exceptional learning (Coates, 2005). The concept of student engagement began with Astin's (1993) theory of involvement, which was later named the theory of student engagement. Student engagement has a long history. Graham, Tripp, Seawright, and Joeckel (2007) advocated that student engagement was not a new idea, but rather one that could be traced back to John Dewey. There is a large body of literature that has shown that academic achievement is positively influenced by active participation in the learning process.

Retention and success rates have been positively correlated with level of engagement (Goncalves & Trunk, 2014). Consequently, student engagement has been identified as a primary variable in understanding dropout rates (Hart, Stewart, & Jimerson, 2011). While studying nontraditional students' motives for remaining in college, Goncalves and Trunk (2014) and Przymus (2011) found that institutions can cultivate increased student engagement by providing more on-campus services and activities. Further, students who are more engaged tend to be successful (Schweinle & Hemling, 2011; Weiss & Garcia, 2015). In a study of engagement among students, Greene et al. (2008) determined that the most highly engaged students persisted. Therefore, it is plausible to study student engagement in terms of academic performance to understand its role.

Engagement Methods

Student engagement is a complex yet important construct in promoting positive outcomes for students (Hart et al., 2011). Deater-Deckard, Chang, and Evans (2013) claimed there were three types of engagement: mental, behavioral, and affective. In a study designed to understand the relationship between level of student engagement and persistence, Hu (2011) discovered that 95% students with high-level social engagement in conjunction with high-level academic engagement persisted. Conversely, Hu also found that students with high levels of academic engagement alone were less likely to persist than those who demonstrated middle-level academic engagement.

Stevenson (2013) noted that efforts to maintain engagement among online students should foster a sense of community. Simmons (2013) explained that African American men who were involved and engaged in Project Empowerment (PE), a campus student support service initiative, persisted more academically. Therefore, engagement and involvement are connected.

One approach to understanding college student success is to identify the amount of time and energy students devote to activities (Astin, 1993). Hu and McCormick (2012) presented an engagement-based typology of students in which they found distinctive patterns of engagement. The authors reasoned that if colleges create analytic techniques consisting of student types and likely outcomes for each type, they can design targeted interventions to increase student engagement and persistence (Siegel, 2011).

Grit was first studied in elementary students by Duckworth and a team of researchers (Duckworth et al., 2007; Goodwin & Miller, 2013a, 2013b). The concept of

grit has transcended into postsecondary education as have student engagement efforts. For instance, Hummell (2015) suggested that college educators and students can benefit from the positive effect that humor can have on engagement and persistence. Perhaps college is too boring and students can use a dose of humor in the classroom and within student support services.

Hallett (2013) proposed that institutional context and culture frame an individual's engagement and experiences. Perrotta and Bohan (2013) suggested that instructors should balance lecture with active-learning strategies to foster more student engagement. Finally, Tinto (2012) advocated for more academic staff support, higher expectations for students, and frequent assessment and feedback. Additionally, institutions should create a culture that better promotes these concepts to ensure student engagement and retention.

There are multiple examples of student monitoring strategies. For example, Nelson, Quinn, Marrington, and Clarke (2012) identified the Student Support Program (SSP), which was created to identify and support those students who are deemed vulnerable of becoming educationally or institutionally disengaged. Actively monitoring student engagement can increase student engagement and persistence. Nelson et al. maintained that it was good practice to monitor student engagement. In fact, many institutions have adopted monitoring systems. Law (2014) also suggested an early alert/progress monitoring system for gauging student engagement. Law recommended allowing instructors to alert advisors when students were struggling in their courses.

Mellor, Brooks, Gray, and Jordan (2015) implemented the Portals to Academic Student Success (PASS) course with the intention of increasing student engagement and retention. The PASS is an intervention course that exposes students to academic skills, goal-setting, and goal planning (Mellor et al., 2015). In fact, the PASS course led to a 10% increase in student retention. Other routes have been taken by universities to improve retention by way of engagement. For instance, some institutions have incorporated orientation courses geared towards retention and engagement; others have created first-year programs in hopes of promoting engagement.

National Student Engagement Assessments

CCSSE. Community College Survey of Student Engagement (CCSE) is a research-based instrument that can be used in three ways: (a) benchmarking instrument, (b) diagnostic tool, and (c) monitoring device. When used as a benchmarking instrument, it establishes national norms for educational practice and performance among technical community colleges. As a diagnostic tool, it can identify areas in which institutions can improve students' educational experiences. As a monitoring device, it can aid institutions in improving overall effectiveness over time. The CCSSE instrument was first administered in 2001 and was derived from the National Survey of Student Engagement (NSSE). The NSSE is a comparable instrument that measures engagement in 4-year colleges and universities.

Colleges use CCSSE feedback to gauge areas of improvement and institutional conditions that influence student engagement. These areas include group or peer learning, student effort, academic rigor, interaction between students and instructors, and student

support (i.e., students report, inadequate faculty interaction). The institution may then implement efforts to increase these interactions to increase student engagement.

NSSE. The National Survey of Student Engagement was originated in 1998 as a method for gathering information concerning collegiate quality (NSSE, n.d.). Institutions use data to identify features of the undergraduate experience that can be altered to improve policies and procedures concerning undergraduate education. For instance, NSSE (2008) feedback showed that students who participated in service-learning activities showed higher levels of engagement. As a result, more schools implemented service learning into their undergraduate programs as a way to increase student engagement.

Results can also provide information regarding how students spend their time and what they gain from their experiences at different colleges and universities. In 2016, over 1,500 institutions in the United States and Canada participated in NSSE. This instrument spurred the development of other surveys, including Beginning College Survey of Student Engagement (BCSSE), which focuses on entering students and their expectations of college; Faculty Survey of Student Engagement (FSSE), which focuses on instructional staff perceptions of student engagement; and Law School Survey of Student Engagement (LSSSE), which focuses on law student experiences.

Other Predictors of Academic Performance

A cornerstone of this study is based on cognitive and non-cognitive skills that may be attributed to college student success. Kommaraju, Ramsey, and Rinella (2013) explained that students with higher GPAs are more academically disciplined. The authors

further communicated that academic discipline, a non-cognitive indicator of high school success, is responsible for students' continued college success. The realization of non-cognitive indicators led to further research of non-cognitive factors of college student success. Similarly, Sparkman, Maulding, and Roberts (2012) argued that traditional predictors of college persistence and success, such as high school GPA (HSGPA) and standardized test scores, only account for 25% of student college success and are unrelated to accurate predictions of college graduation. Therefore, attention has shifted to non-cognitive predictors of college success.

The distinction between cognitive and non-cognitive factors in student behavior is an important one. Cognitive factors are those that are commonly measured by cognitive tests such as IQ or academic examinations. Cognitive factors include concepts such as writing, reasoning, and problem-solving. Non-cognitive skills, a term introduced by sociologists Bowles and Gintis (1976) refer to a set of beliefs, attitudes, and behaviors, which are thought to underpin success in school (Gutman & Schoon, 2013). Non-cognitive factors include constructs such as self-perception, motivation, perseverance, self-control, resilience, and coping. Therefore, non-cognitive skills are not measured by academic assessments or IQ tests (Farrington et al., 2012).

The term *non-cognitive* is used to describe non-traditional predictors that are associated with behavioral, attitudinal, personality constructs and are derived from psychological theories, which are called psychosocial factors. Some non-cognitive factors are actually viewed as cognitive factors outside of higher education. The phrase non-cognitive is oftentimes used interchangeably with the term psychosocial factors.

Psychosocial factors (PSFs) are incrementally predictive of college outcomes (Allen et al., 2010). In addition, PSFs and non-cognitive factors tend to overlap.

Sommerfeld (2011) argued for a semantic change from non-cognitive to non-academic to denote these mental processes and psychosocial constructs for conceptual clarity. However, psychosocial and non-cognitive have been the most widely used terms to denote these factors. Allen et al. (2010) suggested that the identification of dropouts and academic failures can be improved by PSFs and that interventions can help academic performance and persistence. Additionally, non-cognitive constructs have been found to be strongly related to student academic performance (Komarraju et al., 2013; Sparkman et al., 2012).

There are other social-cognitive constructs related to grit and student engagement that have been found to influence student success. Conley (2010) and Arnold, Lu, and Armstrong (2012a) provided that a broader set of knowledge and skills would transfer well across into postsecondary settings. These are soft skills and include attributes such as the ability follow directions, have personal goals, take initiative, work independently, and as a team (Conley, 2010).

A test was created to gage these soft skills. The Academic Success Inventory for College Student (ASICS), is a self-report instrument that allows advisors and admission officers to evaluate academic success in college students (Prevatt et al., 2011). The ASICS is a web-based survey, which assesses several concepts simultaneously that are typically assessed through several individual surveys. The ASICS assessment measures non-cognitive constructs such as career choice, general academic skills, drive and

determination, attentiveness, anxiety, social skills, and perceived instructor effectiveness. Although this instrument measures these constructs to gauge student academic success, it neglects to measure grit and engagement. Therefore, this measure would not have yielded results beneficial to this study.

Emerging research examines other non-cognitive constructs such as dispositions, habits of the mind, executive functioning abilities, external resources, and college knowledge (Sommerfeld, 2011). For instance, emotional intelligence (EI) has also been studied in terms of student success and persistence. Sparkman et al. (2012) suggested that emotional intelligence is the set of attributes that a person must have in order to function successfully. EI is also a relatively new construct studied in relation to student success in higher education although it is widely used in business. It is a non-cognitive construct. Sparkman et al. posed the idea that non-cognitive constructs may be more important to a person's success in life than are cognitive ones. EI, as a non-cognitive construct, may have a positive impact on student success. Improving student emotional intelligence could lead to aiding students in becoming more successful students (Sparkman et al., 2012). Further, emotionally intelligent faculty members have better awareness concerning student emotions, and this allows them to gage student emotional conditions in students that could lead to attrition (Lillis, 2011).

In studies concerning student engagement and persistence in engineering and medical programs, Bédard, Lison, Dalle, Côté, and Boutin (2012) and Watson (2013) argued that stress as a construct was a central determinant of student engagement and persistence. Finally, Cressy (2011) argued that the benefit of social engagement by way

of physical activity and exercise was a positive influence on student academic engagement and persistence. Cressy added that physical activity and exercise were not only good for the student health, well-being, and stress reduction but also engagement and persistence.

Grit and Student Engagement

The current research was focused on the non-cognitive constructs of grit and student engagement in relation to academic performance. Although grit and student engagement are considered non-cognitive, they still involve some level of cognition. For instance, one may not be fully engaged without exerting mental energy to exhibit engagement. Further, one could not display grit without exerting mental energy to determine in his or her mind to continue toward personal goals regardless of setbacks. An individual must decide in his or her mind to do so. Borghans, Duckworth, Heckman, and Weel (2008) advised that contrasting cognitive and non-cognitive factors can be confusing because "few human behaviors are devoid of cognition" (p. 977). Consequently, non-cognitive skills are still cognitive in nature. However, to maintain consistency with previous research, the term non-cognitive was used in this research when referring to grit and student engagement.

Through this study I focused on the affective, behavioral, and cognitive sense of the term engagement as one single entity. Hart et al. (2011) described the term *affective engagement* as a student's feelings toward his or her teachers, peers, learning, and school. The term *behavioral* refers to observable student actions or participation while at school, and focuses on a student's positive conduct, effort, and participation. *Cognitive* refers to

the cognitive processing a student uses while engaged in academic responsibilities as well as the amount and type of approaches a student uses regarding those responsibilities. It is important to note that though the term, *cognitive*, as used in the context of student engagement, refers to what can be measured via traditional academic assessments and exams. Conversely, the larger term *engagement* is still considered non-cognitive because it cannot be measured via traditional academic assessments and exams (Farrington et al., 2012). Although, student engagement is multi-dimensional in nature, this study focused on students' levels of affective, behavioral, and cognitive engagement, as measured by a psychometrically sound instrument that assessed all three to determine the overall level of engagement.

Some studies have suggested a relationship between engagement and academic performance. Taylor and Parsons (2011) suggested there was no doubt that student engagement was important to fostering academic success. Von Culin et al. (2014) and Astin (1999) urged that student engagement was critical to academic performance and success. Moreover, academic performance or grades have been known as the best representation of students persisting through graduation (Pascarella & Terinzini, 2005). Therefore, understanding factors that influence academic performance may provide a better understanding of ways to target and improve graduation rates.

Although grit and student engagement are both non-cognitive constructs, they have a distinct difference. Grit is considered a personality trait that encompasses perseverance and passion (Duckworth et al., 2007), and engagement is considered an academic behavior. Some people are considered grittier than others. Some are naturally

born with an innate ability to persevere even after encountering setbacks more than others. Other individuals tend to relinquish their goals under pressure or trying times. Engagement is an academic behavior, and academic behaviors are major determinants of academic performance (Farrington et al., 2012). Engagement occurs when students decide to exert mental and physical energy on academically purposeful activities. In other words, engagement is what students do to facilitate in their own learning and academic performance. Academic behavior acts as a mediator of other cognitive and non-cognitive factors that affect academic performance (Farrington et al., 2012). This idea suggests that student engagement mediates grit and that they both affect academic performance. It is also important to understand that grit and student engagement are malleable constructs. They may change from person to person depending on the setting and context.

Literature Concerning Methods

There are three main approaches to research: quantitative, qualitative, and mixed methods. This study used the quantitative methodology. Quantitative methodology was considered the best choice for this study because the quantitative approach is mainly concerned with numerical data, while qualitative is concerned with data collected in words and phrases. The quantitative method was chosen for this study because this approach is used for examining the relationships among variables (Creswell, 2012). The variables may be measured with instruments, so data can be analyzed using statistical procedures. This was seen as a better option for this correlational study to understand the relationship among numerical data.

The opposite approach, qualitative methods, was not used for this study. It is an approach for exploring the meaning individuals ascribe to social or human problems (Creswell, 2012). Qualitative methods would not have allowed the researcher to test the data statistically to understand the possible associations among the data. The research questions posed in this study were not suited for collecting qualitative responses. Survey research was conducted because of the nature of the study because survey research provides quantitative or numeric description of attitudes, opinions, or trends (Creswell, 2012).

This study used the Pearson product moment correlation coefficient as a statistical test to understand the relationship among data as is standard for correlational studies that incorporate linear relationships (Creswell, 2012). Other statistical tests can determine non-linear relationships such as Spearman's rho, point-biserial, and phi-coefficient. Spearman's rho determines the relationship among non-linear ordinal data, point-biserial tests continuous data with a dichotomous variable, and phi-coefficient is used to determine the degree association when both variable measures are dichotomous. Therefore, the best test for this study was Pearson product moment correlation coefficient to determine the degree of association among the variables linear relationships (Creswell, 2012). Using the Pearson product moment correlation coefficient allows the researcher to measure the degree of association via the direction (positive or negative) and strength (size of coefficient) between variables.

Summary

This section referenced literature pertaining to the topic of student success as it relates to grit and engagement. The next section outlines the methods that were used to complete the study. Section 3 details the design of the study, the approach that was taken, important details concerning the setting and sample, and the instruments that were used to acquire the needed information in understanding academic performance in relation to grit and student engagement.

Section 3: Research Method

Introduction

I examined the relationships between grit, student engagement, and academic performance. In this section, I outline the design and approach, the setting and sample, and the instrumentation used for the study. Further, I explain data collection and analysis procedures, and discuss the steps I took to protect participants' rights.

Research Design and Approach

In this quantitative study, I used a convenience sample of all students of WSCC. A correlational design was used to measure the relationship between grit, student engagement, and academic performance. Creswell (2012) suggested that the quantitative approach is necessary when one aims to understand the mathematical relationship between variables. A qualitative approach would have been less appropriate for this study designed to investigate the overall relationship between concepts, and more appropriate for a study designed to take an in-depth look at grit.

Setting

As a multi-campus institution, WSCC serves students in both metropolitan and rural areas. The demographic make-up of the population is 75% African American, 14% European American, 8% unknown, 1% Hispanic, 1% two or more races, 59% female, and 41% male. This institution is comprised of 3,000 students, approximately 500 of whom are first-time, first-semester students; therefore, all first-time, first-semester students had to be excluded from the study because they could not have reported their FYGPA yet.

Sample

Of the 3,000 students, there were 2,500 students that were in their second or later semester and therefore, were eligible for the study because they could report the FYGPA. Although, a convenience sample may have biases concerning overrepresentation or even underrepresentation of certain groups, it was my chosen sampling method due to its simplicity in acquiring willing and able participants (Creswell, 2012). Therefore, a convenience sample of all WSCC students was used, and consisted of 116 participants from the eligible 2,500 students, which was a response rate of 5%. Even though the response rate was very low, there were enough completed surveys to calculate the correlations because a priori power analysis in G* Power determined that 112 participants were needed for statistically valid results (Faul, Erdfelder, Buchner, & Lang, 2009). The calculation was based on 90% power for the statistical analyses, a medium effect size of .30, and the standard 5% significance level (Cohen, 1988).

The population consisted mostly of African American students with 2,276 African American/Black students, 427 White/European American students, and 297 students of other races/ethnicities. However, the participants from the sample consisted of approximately 90 Black/African Americans, 20 White/European Americans, three of other races/ethnicities. Most students were between the ages of 18 and 24, which made up 67% of the sample. There were more females than males in the sample, 80% to 20% respectively. Although full- and part-time students received the email invitation, full-time students comprised 85% of the sample. Participants had to have an FYGPA to participate in the study. The FYGPAs of the sample were high, mostly above 3.0.

Instrumentation and Materials

I used the following assessment instruments in the study:

- The Short Grit Scale (Grit-S; Duckworth & Quinn, 2009).

- Student Engagement Instrument-College (SEI-C) survey (Appleton et al., 2006).

- Self-reported FYGPA.

The Grit-S and the SEI-C were appropriate for this study because they measured the variables, which were grit and student engagement. Permission is universally granted for free use of the SEI-C instrument for the purposes of research and practice that will not result in profit. The Grit-S is also freely available to researchers and educators for non-commercial purposes. Therefore, formal permission to use these instruments was not required.

Short Grit Scale

The Grit-S scale is an 8-item instrument that measures grit based on two subscales concerning consistency of interest and perseverance of effort (Duckworth & Quinn, 2009). Each question assessed one of these two facets of the variable grit. The Grit-S has demonstrated evidence of internal reliability with a Cronbach's alpha ranging from .70 to .84 in six different reliability tests (Duckworth & Quinn, 2009). The instrument was correlated, and validity was established against the Big Five Consciousness subscale of conscientiousness, and validity was ensured. Completion of this survey usually takes two to three minutes. To obtain grit scores, the researcher must add all points from each completed survey and divide by eight. Grit levels range from 1 to 5, with 5 being the highest, which denotes the highest level of grit. The survey requires Likert-style

responses *not at all like me, not much like me, somewhat like me, mostly like me,* and *very much like me.*

Student Engagement Instrument-College

The SEI-C is a 35-item instrument that measures student engagement based on five subscales including (a) teacher-student relationships, (b) control and relevance of school work, (c) peer support at school, (d) future aspirations and goals, and (e) family support for learning (Grier-Reed et al., 2012). Each question assessed one of these five facets of student engagement. The SEI-C has demonstrated evidence of internal reliability with a Cronbach's alpha ranging from .79 to .85 for each construct denoted as subscales (Grier-Reed et al., 2012). The instrument has also demonstrated evidence of convergent validity because it has positive correlations with the Career Thoughts Inventory (Grier-Reed et al., 2012). The Career Thoughts Inventory is directly related to students' thoughts concerning persistence to their career goals through educational attainment. The survey requires Likert-style responses *strongly disagree, disagree, agree,* and *strongly agree*. Points from each response item are added and then divided by 35 (the number of items). The closer the score is to 4, the higher the engagement, the closer to 1, the lower the engagement. Participants in my study completed the survey via SurveyMonkey.

Demographic Survey

Demographic characteristics of the participants were needed to describe the participants of the study. Therefore, I asked the participants to identify their age, gender, ethnicity, FYGPA, and number of credit hours completed. This information was used to provide descriptive statistics, and to compare results to the demographic profile of the

institution's student body in relation to the FYGPA, which served as proxy for academic performance.

Data Collection and Analysis

Students were recruited by an invitational email sent by the academic dean that included the link to the survey on SurveyMonkey. I collected data after permission was granted by the institutional review boards of WSCC and Walden University. The first part of the survey contained information regarding informed and implied consent. Creswell (2012) suggested that the consent form should outline participant rights, including their right to withdraw at any time, their voluntary participation, and their right to know the purpose. Students consented by completing the surveys. Participants anonymously completed the Grit-S and SEI-C, and self-reported their FYGPA and demographic information. The nature of the scale for each variable follows:

- FYGPA, continuous/interval/criterion.
- Student engagement scores, continuous/interval/predictor.
- Grit scores, continuous/ interval/predictor.

In this correlational study, I addressed the following two research questions and hypotheses:

Research Question 1: What is the relationship between student engagement scores as measured by the Student Engagement Instrument-C and academic performance as measured by FYGPA at WSCC?

$H1_0$: There is no statistically significant relationship between Student Engagement Instrument-C scores and academic performance as measured by FYGPA at WSCC.

$H1_a$: There is a statistically significant relationship between Student Engagement Instrument-C scores and academic performance as measured by FYGPA at WSCC.

Research Question 2: What is the relationship between grit scores as measured by the Grit-S instrument and academic performance as measured by FYGPA at WSCC?

$H2_0$: There is no statistically significant relationship between Grit-S scores and academic performance as measured by FYGPA at WSCC.

$H2_a$: There is a statistically significant relationship between Grit-S scores and academic performance as measured by FYGPA at WSCC.

Once students were invited to complete the survey via email, they were allotted 3 weeks to complete the survey. After 3 weeks, all data were downloaded from SurveyMonkey and compiled into an Excel spreadsheet. The surveys were sent to the total student body, and there was a total of 132 respondents. However, 16 surveys were incomplete and, therefore, excluded. The total sample was 116 surveys, representing a response rate of 5%. All responses were then loaded into SPSS (Statistical Package for the Social Sciences, Version 23) to analyze using the Pearson product moment correlation coefficient function and to report findings as consistent with each research question and hypothesis. Pearson correlation was the correct parametric test because data were treated as interval. Descriptive analysis was used to describe the demographic information, such as gender, enrollment, status, and race/ethnic group.

Protection of Participants' Rights

The collection of data took place after approval from WSCC and Walden University's Institutional Review Board (approval # 04-06-16-0395120). I sent a formal

letter of cooperation to WSCC, which included the purpose of the study, the fact that there is no compensation for the students, and the time required of participants to complete the online survey during non-academic time. The letter included descriptions of the activities to be conducted, benefits to the organization because of the study, and the provisions made to protect the anonymity of participants (see Creswell, 2012). No participant was placed at risk or harm because no personal information was obtained through this study. All data will be stored on a password-protected laptop for 5 years and will then be destroyed.

Section 4: Results

Introduction

I examined the variables grit, student engagement, and academic performance to determine relationships based on the two research questions for this study. The following instruments were used to measure the three variables: Grit-S, which measured grit; SEI-C, which measured student engagement; and self-reported FYGPA, which measured academic performance. The use of the instruments, the data analysis, and the findings are presented in this section.

Research Tools

The two surveys, Grit-S and SEI-C, and the demographic questionnaire were combined into one survey of 49 questions, which included six prompts pertaining to descriptive response items. To obtain the composite score for the Grit-S, all responses were assigned a number from 1-5, which I reverse-coded by negatively worded questions. The numbers from each response item were added and the total was divided by eight (the total number of response items) to obtain a mean. Per the developers, the higher the score, the higher the grit level. The SEI-C was also administered through SurveyMonkey and to obtain a composite score, the response items were assigned a number from 1 to 4. The negatively worded responses were reverse-coded, and the number from each response item was added and totaled. I then divided the total by 35 (the total number of questions) to obtain a mean. Once calculated, the closer to 4, the higher the student engagement. I calculated both the grit and student scores by hand after downloading and

printing the data from SurveyMonkey. A total of 116 students responded to the email

invitation sent by the academic dean, and responses were collected over a 3-week span.

<div align="center">Data Analysis</div>

Descriptive Statistics for Participant Demographics

The first part of the survey required participants to answer a few questions regarding

demographic information: gender, enrollment status, age, race, and FYGPA. the

breakdown according to gender for the sample of 116 participants indicates that more

females than males participated in the study. 75% were female and 25% were male. Data

regarding the participants' enrollment status was collected and summarized most

participants had full-time status, which made up 71%. Less than one-half of the

participants were part-time students, which made up 29%.

Data regarding each participants' age were collected. Table 4 shows the frequency

of participant ages by group.

Table 4

Participant Age Groups (N = 116)

Age Group	Frequency	Percent
18-24	67	57.8
25-34	21	18.1
35-44	16	13.8
45-54	7	6
55-64	3	2.6
65-75	1	.9
75+	1	.9

As is shown in Table 4, I collected the participants' ages and assigned each to a group

because it was not necessary to report each individual's specific age. The results indicate

that most participants were between 18 and 24, which should be expected on a

community college campus.

Demographic information concerning participant race and ethnicity was collected.

Table 5 provides an illustration of participants' race and ethnicity.

Table 5
Participant Race/Ethnicity (N = 116)

Race/Ethnicity	Frequency	Percent
Black/African American	95	81.9
White/European American	18	15.5
Multi-Racial	3	2.9

As indicated in Table 5, data showed that the majority of the participants were Black or

African American. This information was collected only to gauge the background of the

participants of the study, and was self-reported. The results were expected because the

research was performed at a historically Black community college.

Table 6 provides an illustration of the participants' FYGPA ranges.

Table 6

FYGPA Range (N = 116)

FYGPA Range	Frequency	Percent
3.6-4.0	43	37.1
3.1-3.5	42	36.2
2.6-3.0	21	18.1
2.1-2.5	6	5.2
2.0 or below	4	3.4

As shown in Table 6, there were 43 participants with FYGPAs between 3.6 and 4.0. Most

participants self-reported FYGPAs of more than 3.0.

FYGPAs were the dependent variable. The mean for FYGPA was 3.30 which indicates that the students from the sample had higher than average academic performance. The median was 3.41, which is important because it indicates that FYGPA that was in the middle was a better representation of the middle of the group, as opposed to the mean which was lower. The mode was 4.0, which means that more participants actually had perfect FYGPAs. The standard deviation measures the variation of the data set, which was .6353. The range was 3.0, and the lowest FYGPA score(s) reported was 1.0 (the minimum); the highest FYGPA score(s) reported was 4.0.

Research Question 1

What is the relationship between student engagement scores as measured by the SEI-C and academic performance as measured by FYGPA at WSCC?
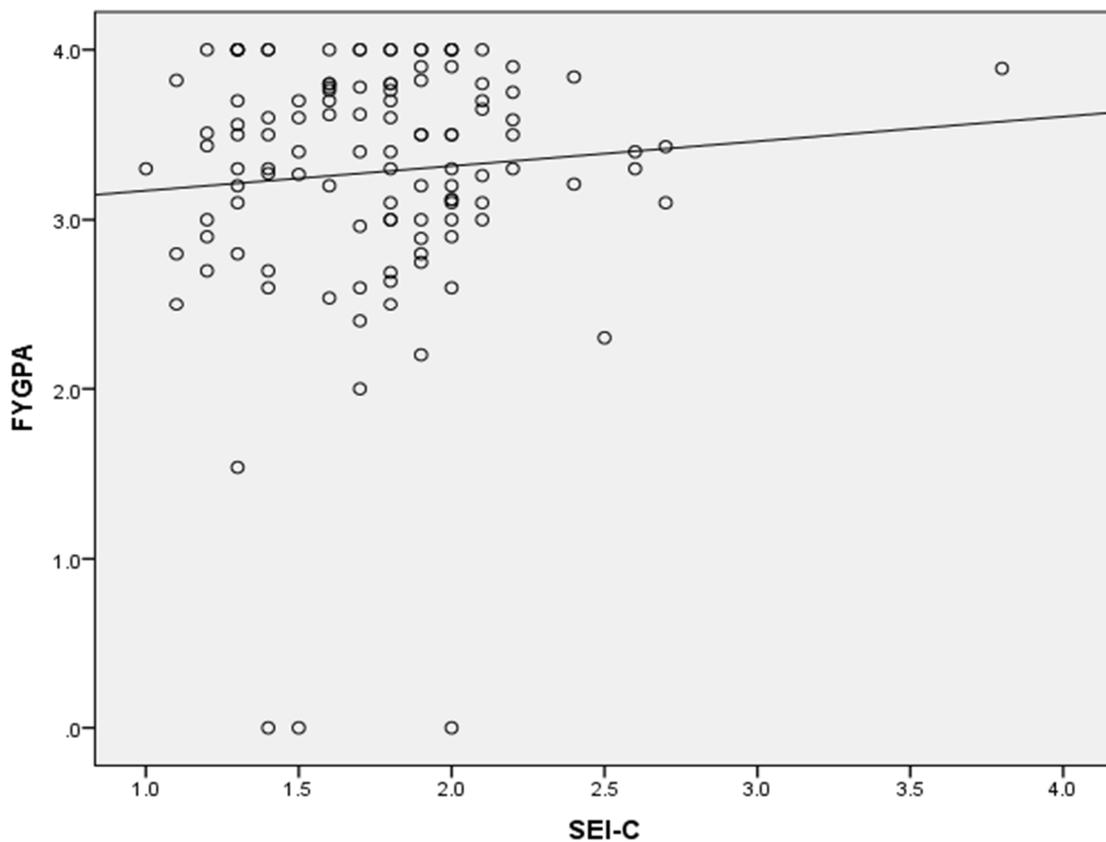
$H1_0$: There is no statistically significant relationship between SEI-C scores and academic performance as measured by FYGPA.

H1a: There is a statistically significant relationship between SEI-C scores and academic performance as measured by FYGPA at WSCC.

I used the SEI-C scores, taken from those items on the survey that were the SEI-C questions, to calculate descriptive statistical data. The mean value for SEI-C was 1.78, which means this was the average of the scores. The minimum score was 1.0, and the maximum score was 3.7, which indicates that no score was higher than 3.7 or lower than 1.0. However, the closer a student's SEI-C score was to 4, the higher the engagement, as indicated on the SEI-C. The closer the student's SEI-C score was to 1, the lower the engagement, as indicated on the SEI-C. The mode was 1.8, which means that number

occurred the most times. The low student engagement mean score indicates low levels of student engagement. The standard deviation was .413, which indicates there was not a high rate of dispersion.

Although SEI-C scores were lower than 4, which indicated low levels of engagement, the Pearson correlation indicated no statistically significant relationship between the SEI-C scores and academic performance, as measured by FYGPA. There was no statistically significant relationship between the two ($r = .081$, $p = .194$). Those findings are indicated in Figure 1.

Figure 1. Scatter plot depicting SEI-C scores and FYGPA.

There is no linear impression within the scatter plot, and there was no definitive relationship between the two sets of scores. Therefore, the findings failed to reject the null hypothesis of Research Question 1.
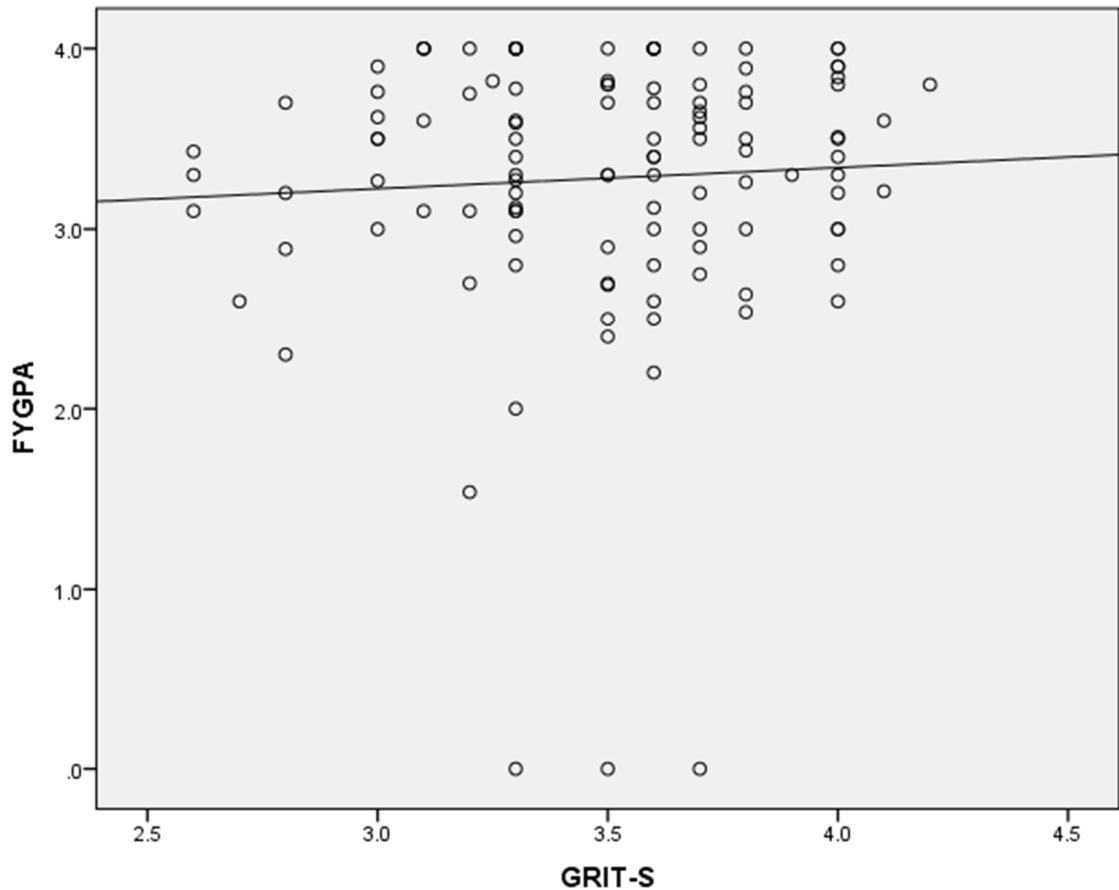
Research Question 2

What is the relationship between grit scores as measured by the Grit-S instrument and academic performance as measured by FYGPA at WSCC?

$H2_0$: There is no statistically significant relationship between Grit-S scores and academic performance as measured by FYGPA at WSCC.

H2a: There is a statistically significant relationship between Grit-S scores and the academic performance as measured by FYGPA at WSCC.

The mean value for grit scores was 3.49. The lowest grit score (minimum score) was 3, and the highest grit score (maximum score) was 4, which indicates that no student's grit score was less than 3 or higher than 4. The median was 3.5 and the mode was 3, which means that the score of 3 occurred the most times in all the scores. The maximum score that could be indicated was a 5 on the Grit-S portion of the survey. The standard deviation was .368, which indicates a small rate of dispersion.

Although Grit-S scores were moderate to high (meaning there were mostly high levels of grit), the Pearson correlation indicated no statistically significant relationship between academic performance, as measured by FYGPA, and Grit-S scores. There was no statistically significant relationship between the two ($r = .058, p = .269$). Therefore, the findings failed to reject the null hypothesis. Figure 2 provides an illustration of this relationship.

Figure 2. Scatter plot depicting Grit-S scores and FYGPA.

Figure 2 indicates that there was no relationship between Grit-S scores and FYGPA.

There is no definitive linear impression within the scatter plot. There was no significant

linear relationship between the FYGPA scores and the Grit-S composite scores.

Therefore, the findings failed to reject the null hypothesis for Research Question 2.

Findings

The results of this study show no statistically significant relationship between grit

scores or student engagement scores and academic performance as measured by the self-

reported FYGPA. I determined the results by using a one-tailed Pearson correlation so that an increase could be predicted. Although, this disregards the possibility of a relationship in the other direction, a relationship in the other direction was deemed highly unlikely. In one way, the findings are inconsistent, in that they show low levels of student engagement for Research Question 1, which questioned the relationship between student engagement and academic performance. Yet, they show moderate to high grit levels for Research Question 2, which questioned the relationship between grit and academic performance. However, both research questions yielded no relationship between the variables. It is in this way that the results show a consistency in that there is no relationship among the variables. A possible interpretation of this is that the variables are simply not related.

There are alternative ways to interpret these findings. One possible interpretation of the results is that although student grit levels are high, meaning that they should be more likely to hold on to their long-term goal of graduating, there is a disconnect because students are not graduating at WSCC. The disconnection could be due to that in true nature of a community college, many of the students plan on transferring elsewhere to complete their programs of study and graduate. The students are possibly not fully integrated academically and socially into WSCC due to future graduation goals. Further, the majority of the participants had FYGPAs of 3.1 or higher. Yet, there is no relationship between the high grit levels and the FYGPA, which does not adequately explain the low graduation rates because the students are seemingly capable of doing so. However, the

statistical test provided that there is no relationship between grit scores and academic performance as FYGPA.

Another way of interpreting the findings is by taking into account the student engagement levels. The student engagement levels are low because most of the scores were in the range of one, which was the lowest possible score. None of the scores were a four, which would indicate high levels of student engagement. This is puzzling; although students had low engagement, their FYGPAs were high overall. One could question how this is possible for students to be barely engaged and still have high FYGPAs, which could provide more information concerning low graduation rates. This brings into possible question grade inflation, or even the truthfulness of the self-reported FYGPAs. This also calls into question whether or students are truly academically and socially integrated into the institution. Students are possibly disengaged due to not being fully integrated because they have plans on transferring to other institutions for completion of their programs of study and graduation. Regardless, the statistical test provided that there is no relationship between student engagement and academic performance as FYGPA.

Conclusion

I found there was no significant relationship between student engagement and academic performance as measured by FYGPA. I also found that there was no significant relationship between grit and academic performance as measured by FYGPA. It is noted that the SEI-C scores indicated that there were low levels of student engagement, yet there were higher levels of grit indicated by the Grit-S. It is questionable as to how a student can have high levels of grit and low levels of student engagement, and how

students can have high FYGPAs, but low graduation rates. That could be because of the low levels of student engagement. Perhaps students have a desire to hold to their goal of graduating but are not engaged enough to hold to this goal over an extended period of time. However, the results still show that there is no relationship between the low levels of engagement and FYGPA, nor is there is a relationship between the high grit levels and FYGPA. Therefore, I failed to reject the null hypotheses of both research questions.

Section 5: Discussion, Conclusions, and Recommendations

Introduction

In this section I present a summary of the study based on the results provided in Section 4, interpretation of these findings on a broader scope, implications for social change, recommendations for actions, and recommendations for further study. This correlational study was completed in order to investigate whether or not there was a relationship between grit scores (Grit-S), student engagement scores (SEI-C), and academic performance level as indicated from self-reported FYGPA. I found that there was no relationship between the variables. The research questions that I sought to answer were:

1. What is the relationship between student engagement and academic performance at WSCC?

2. What is the relationship between grit and academic performance at WSCC?

Interpretation of Findings

The findings are both consistent and inconsistent with previous research which has show significant and insignificant relationships between grit and academic performance, and engagement and academic performance. However, these other studies were conducted at different types of institutions. For example, Strayhorn (2013) studied grit and academic performance concerning a solely male, African American population of 140 at a predominantly White institution. The author found that grit did positively affect academic performance. Strayhorn noted that it predicted graduation for those students better than traditional predictors such as ACT scores and high school grades. However, in

this study, I was found that grit scores were not related to academic performance scores (see Figure 2), which could be attributed to the difference in students. Further, while Strayhorn's study (2013) included a completely African American male sample, my study had a higher number of female students (see Table 4). Perhaps, grit correlates with academic performance for African American men and not women.

Chang (2014) studied the relationships between grit and academic performance at a highly selective, private, 4-year institution and found no significant relationship between the grit composite score and academic performance. Chang's findings are attuned with those in this study. However, Chang's study was conducted with the most competitive students with ACT scores averaging 29 or better, and the sample was large, with more than 2,000 participants. The results of this study are consistent with Chang's study in that I found no significant relationship between grit and academic performance. Chang did find that the perseverance subscale of the Grit-S did positively correlate with academic performance, but that the overall grit composite score did not. Because Chang had mostly female participants, it can be assumed from her study and mine that perhaps grit composite scores do not correlate to academic performance for females.

Another difference between Chang's (2014) study and this study is that this study was done based on the assumption that students would self-report their true FYGPA (see Table 9). One limitation of this study was that students self-reported their FYGPA. Chang collected student GPAs from the university instead of using self-reported GPAs from the participants. However, that still does not negate the fact that upon using the

composite grit scores, no relationship was found between grit and academic performance in either study (see Figure 2).

Cross (2014) studied grit in 699 doctoral students matriculating in an online environment. The findings were that grit did share a small yet significant relationship with academic performance in females and not males. Cross also found significant relationships between grit and age, gender, and self-reported number of hours spent on coursework. Cross's study was different from this study in that those students were working on a terminal degree. It could be expected that doctoral students would have higher grit levels than 2-year college students.

Conversely, Pineda-Báez et al. (2014) studied the degree of association between engagement and academic performance using Spearman's rho, via the Spanish version of the NSSE, at seven Colombian universities with high-quality accreditation. With a total of 1,906 participants, the study yielded statistically significant yet weak results. The study indicated that the higher the GPA, the higher the engagement, although the relationship was weak. Those results were contrary to this study's results in that most of the participants had high GPAs, yet they had low engagement scores overall. In my study, the high GPAs were not associated with high levels of engagement. A major difference between Pineda-Báez et al.'s study and this study is that this study included participants from only one institution while theirs included participants from seven different Colombian universities and totaled over 3,000 students. Pineda-Báez et al. did not disclose the ratio of men to women or cultural and ethnic group breakdowns.

Hu and McCormick (2012) completed a study concerning 18 participating institutions using student responses from NSSE. The authors found student engagement was only associated with academic performance when GPAs were low. In other words, the lower the GPA, the more engaged the students were in that study. Conversely, although students had high FYGPAs in my study, their engagement levels were low. The results of this study are inconsistent with Hu and McCormick's outcome because this study showed that at this predominantly African American community college, there were no significant relationships between academic performance and student engagement, regardless of FYGPA (Figure 1).

Weiss and Garcia (2015) studied academic performance and engagement at Mexican universities using the Programme for International Student Assessment instrument to obtain engagement levels. Weiss and Garcia found that students who had a higher sense of belonging on the campus had better academic performance. In my study, although students had high academic performance, they had low engagement (see Figure 1). It could be concluded that students have little to no sense of belonging at WSCC, which may account for their disengagement. Weiss and Garcia found that engagement was an essential ingredient for student achievement and persistence. This notion could help explain WSCC's low graduation rates.

Historically, researchers have used traditional methods to understand what influenced academic performance. These traditional methods include assessing SAT/ACT scores, among other factors. Recently, there has been a shift to understanding how personality, behavioral traits, and non-cognitive factors influence academic

performance (Strayhorn, 2014). However, the relatively new construct of grit has not been extensively researched, whereas student engagement is more commonly investigated.

Academic performance is a factor that influences and even predicts student graduation. Although there are other non-cognitive factors that relate to academic performance, grit and student engagement were the non-cognitive factors I investigated in this study. Scores from grit survey questions (see Table 11) and student engagement survey questions (see Table 10) were analyzed in relation to FYGPA to understand the relationship. However, I found that both variables were not significantly correlated to the FYGPA (see Figures 1 and 2).

In this study, I explored whether there was a relationship between student engagement scores and academic performance scores at WSCC. I found that there was no statistically significant relationship. The r was closer to zero, which meant there was no statistically significant relationship (see Figure 1). I also questioned if there was a relationship between grit scores and academic performance scores at WSCC and found that there was a no statistically significant relationship, as r was closer to zero (see Figure 2).

Farrington et al. (2012) suggested that there are relationships between grit and academic performance, and that these relationships show stronger when they are measured concurrently. They suggested measuring grit while students are in a particular course to understand the relationship between their grit level and academic performance.

One of the basic tenets of psychology is that human behavior and traits are malleable; it is possible to change one's behavior (Farrington et al., 2012). Grit and student engagement can change. They are malleable constructs, and, depending on the context or situation, one's grit or engagement may change. A person may appear to exhibit grit in a certain setting and appear apathetic in another. Grit and engagement can change depending on the classroom context or the psychological conditions. Changes in context or psychological conditions of students have been associated with an increase or decrease in their effort (Farrington et al., 2012). The context of the survey or psychological conditions of the students at the time of the data collection could have affected the results. Institutional conditions could also have had an effect on the results of the study. For instance, if students were not happy with the courses they were in during the semester of taking the survey, student sense of belonging, student networking, and relationships with professors could have affected results. Any of these could have had an effect on student grit or engagement at the time of the surveys, given that results showed low engagement levels and high grit levels.

Although I found no statistically significant relationship, it does not negate the fact that other research has found significant relationships between grit, student engagement, and academic performance (Cross, 2014; Strayhorn, 2013). This particular study was conducted at an HBCU with unusually low graduation rates. Further, Tinto (1993) suggested that there are many non-cognitive factors that contribute to student attrition. Because the relationships probed in this study were found to be insignificant in relation to one another, findings indicate that for 2-year HBCUs, there may be other

factors or other combinations of factors. Given the small sample size, these results are generalizable to only WSCC.

The fact that the results showed low levels of engagement but high FYGPAs bolsters the theoretical underpinning of this study. Tinto's theory of retention explicitly states that low levels of engagement can influence student persistence to graduation. If students have not been socially integrated to the campus, regardless of how high GPAs are, they may still drop out. Tinto has claimed that institutions should be engaged with students, and has contended that engagement necessary for both the student and institution. Institutions should engage students through their expectations, support, assessment feedback, and involvement (Tinto, 2012). It seems that in the case of WSCC, students could be disengaged if the institution has not engaged itself nor socially integrated the students. This could explain the low graduation rates because although students have high grades, they are simply not engaged.

Implications for Social Change

Graduation rates will need to increase at WSCC for students to have the potential for a better quality of life, which could lead to stronger communities and stronger workforce development. WSCC's quality enhancement plan is highly focused on improved student engagement, and its reputation will reflect its overall performance as a better school when graduation rates improve. As a result of my findings, the institution will know that student engagement is not the main factor that drives increasing academic performance at WSCC. Creating conditions that foster student success has never been more important (Kuh et al., 2006), and WSCC should now seek to understand other

constructs and conditions that may lead to increased academic performance and improvement of graduation rates such as self-efficacy, motivation, college preparedness, and related factors. These research efforts could lead toward producing more graduates, thereby increasingly providing quality higher education to underserved groups of students.

Kuh et al. (2006) proposed that four-fifth of students rely on higher education to prepare them to live financially self-sufficient lives. College education also aids in helping college graduates to deal with complex social, political, and cultural matters that they must face. Finally, Kuh et al. (2007) suggested that college graduates make approximately $1 million more within their lifetime than do those without a degree. However, if current dropout trends continue, it is predicted that there will be a deficit of 14 million college-educated adults by 2020. Therefore, improved graduation rates can benefit the institution, its community, its students, and the society at large.

Recommendations for Actions

The results from this study will be disseminated to WSCC. Although, results showed no statistically significant relationships (see Figures 1 and 2), the discussion of how to increase graduation rates should focus on other non-cognitive constructs that might play a role in student academic performance. They could also seek to understand grit and student engagement in association with other non-cognitive constructs, such as exploring other non-cognitive constructs, such as academic mindsets, learning strategies, socials skills, and academic behaviors to understand those relationships with academic performance. They should examine other conditions that have been created at the

institution that either fosters positive student academic performance or the contrary. Finally, the constructs of grit and student engagement could also be combined and studied together to understand their relationship instead of as separate entities as in the study.

Several other conditions influence students' academic performance. Concerning the theoretical underpinning of this study, Tinto's (2012) concept of social integration, Tinto's (1975) idea of student interaction, and Tinto's (1987) idea of institutionally provided educationally-purposeful activities all promote the idea that institutions have a responsibility in students' academic performance. All three concepts focus on social implications of the institutions as institutions play a substantial role in students' academic performance. Institutions must provide outlets for ensuring academic performance. Social conditions that affect academic performance are previous academic performance and level of preparedness, economic factors, academic culture, and peer influence. Institutions can use the proposed strategies detailed in the following.

Previous academic performance and level of preparedness are important to college academic performance. Tinto (2012) posed the idea that institutions must ensure that students are equipped to achieve positive academic performance. They must enter with or be provided the opportunity to be successful. For instance, highly selective colleges may screen for a set of attributes that exemplify students as already equipped to succeed or provided students with opportunities to become equipped. Many less selective colleges provide developmental courses for students to gain more fundamental knowledge in core areas such as math and reading. Other institutions provide mandatory

orientation courses that equip students with skills such as time management, critical thinking, and study skills.

Economic factors may also drive student effort concerning academic performance. Economic stressors are a concern because if students are overworked and are not allowed to socially integrate or engage within the institution, then engagement is no longer taking place (Tinto, 2012). The fact that WSCC is a community college means that it is home to non-traditional students. Many are students who work to provide for their families. Many students do not live with their parents and have bills and other expenses. There are also higher percentages of older students who may even be on fixed incomes. Given these economic stressors, institutions must be sure to provide avenues to obtain an affordable education to remove the stress of paying for education in conjunction with other financial stressors. Institutions may provide tuition discount and reduction incentives, scholarships, grants, and even work college programs. Through college work programs, students will be able to work on campus as fulfilment of their tuition.

Institutions must also be mindful of their academic culture. Academic culture includes the expectations for the student and their overall academic performance. Higher education administration and faculty have a duty to express high expectations concerning student academic performance. Tinto (1993) advocated that institutions be intellectually stimulating, and that faculty members employ high expectations. Expectations can be expressed through course syllabi, via campus-wide email concerning student conduct and academic attainment, verbally throughout courses, and reinforced in other ways on

campus, so that students realize that expectations are uniform and throughout the campus.

Tinto (1987) also suggested that student-faculty interaction is important concerning

academic culture. It must be expected that there is student-faculty interaction. Through

this interaction, faculty must express their expectations concerning academics. Tinto

urged that there are strong relationships between every academic achievement and degree

attainment. Student-faculty interaction also has a strong relationship with many social

outcomes including becoming involved in campus activities and having stronger

influence on other students. In fact, the academic culture concerning all expectations

must be consistent, so that they are clearly recognized by all students. Institutions also

have a responsibility to focus more on student outcomes as prescribed by the set

expectations of the academic culture.

Peer influence presents another social factor that is of concern pertaining to

academic performance. There is power in peer influence. Therefore, it is important that

students gain this experience in college. Tinto (2012) offered the idea that peer

interaction positively effects students in the areas of leadership skills development,

scholastic growth, growth in problem-solving and critical thinking skills, and developing

cultural sensitivity. The author also noted that there are even long-term effects associated

with peer influence that remain in students beyond college and into their careers.

Cooperative learning or peer groups even allow students to hone much-needed skills such

as public-speaking, ability to influence peers, and ability to successfully work

collaboratively (Pascarella & Terezini, 2005).

Institutions must provide students with positive outlets to influence one another. These outlets include but are not limited to extracurricular activities including intramural sports, social clubs such as sororities and fraternities, collaborative and group projects and assignments, opportunities to tutor other students, and opportunities to discuss course content. Peer influence, if implemented, could improve academic performance concerning graduation.

Several recommendations for action have been provided further to understand the academic performance at WSCC. It is recommended that previous academic performance and level of preparedness, economic factors, academic culture, and peer influence all be studied within the context of social influences of academic performance. Although, these are not non-cognitive factors, it is recommended that WSCC goes beyond the non-cognitive factors to study the aforementioned social influence that could have an effect on the academic performance of students.

The results of this study may be disseminated to and presented at professional conferences and published in appropriate, professional journals. One conference is The National Institute for Staff and Organizational Development (NISOD) conducted by University of Texas-Austin every May. This is a conference specifically for technical and community colleges. One journal considered for publication of the study is the *Journal of Higher Education*. This journal is the leading scholarly journal on the institution of higher education. The articles published within the journal discuss issues important to higher education faculty members, administrators, and program managers while providing scholarly insight and investigating critical issues.

Recommendations for Further Study

I would recommend a longitudinal study of students in high school, to entering college, and to college graduation to understand the effects of grit and engagement. I recommend this longitudinal approach because students change over time. From high school to college is a major transition, and by the time of graduation, some student may have changed drastically. However, it would provide a better understanding of grit and engagement on college completion.

I would also recommend further study of non-cognitive factors at larger HBCUs or on several HBCUs concurrently because no other study has been conducted to understand the relationship between grit and student engagement on HBCU student academic performance as they are understudied in comparison to PWIs (predominantly white institutions). Perhaps, a larger HBCU or several HBCUs simultaneously would provide more generalizability. Another recommendation is for a hierarchical regression analyses to be performed to understand if grit or student engagement predicts academic performance and to what extent. I recommend this because, although this study showed no statistically significant relationships, one construct may better predict academic performance than the other. Understanding the predictive outcomes of the constructs could lead to better understanding of how to improve academic performance at HBCUs, which served underserved and underrepresented groups. It is important to understand the causal relationship between these variables. Research needs to be conducted to understand whether grit or student engagement causes a level of academic performance.

In conclusion, I sought to understand the relationship between grit, student engagement, and academic performance. To do this, I used the reliable and valid instruments Grit-S and SEI-C as well as self-reported FYGPA. The Pearson product moment correlation was used to test the linear relationship between the dependent and independent variables. It was found that there was no relationship between grit and academic performance and student engagement and academic performance for 2-year, HBCU students. Although there were no significant results, there is still use for grit and student engagement in relationship to combinations of other constructs that attribute to student academic performance (Chang, 2014; Pineda-Báez et al., 2014). The issue of academic performance must be better understood in order to better gauge the low graduation rates among higher education institutions.

Graduation from college is an important milestone in today's world in terms of quality of life. College administrators must be dedicated to understanding what factors are influencing academic performance in order to ensure that more students are able to graduate, especially in underserved and understudied populations. Without understanding these factors, it is likely that graduation rates will not increase. It will take administrators who are invested in making a difference in students' lives to continue this work and understand, outside of grit and student engagement, other constructs that may help more underserved students navigate toward a better life while increasingly providing quality education.

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