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The Freshman Academy and Its Effect on Ninth Graders' Attendance, Discipline, and Academic Achievement

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This is to certify that the doctoral study by

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Abstract

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MA, Troy University, 2007

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

The transition from middle school to high school is challenging for students and can manifest in poor academic performance, chronic absenteeism, and increased discipline incidents. The Freshman Academy (FA) is designed to improve these outcomes. The problem is that FA has been mainly studied in suburban and urban schools, not rural schools. The purpose of this causal-comparative study was to compare the FA program on rural 9th graders' attendance, behavior, and end-of-course achievement test scores to a control-group school. Eccles and Midgley's stage-environment fit theory framed this study. Research questions focused on whether there were any significant differences between the two groups. Archived data on 95 freshman students from each rural high school were collected. A two-way multivariate analysis of variance was used to analyze whether the FA intervention significantly improved outcomes. Statistically significant results were obtained; however, findings only showed a moderate effect size for improving attendance and a small effect size for raising achievement and improving discipline. The findings did not demonstrate that the FA implemented in the rural school setting had an overall practical benefit on academic achievement, discipline, or school attendance compared to the control school. The main implication of the results is that, to improve freshman student transition outcomes, FA needs additional, research-based interventions combined with it. The social change implications of this study are that these results will inform public school leaders about whether the FA program is a practical and worthwhile use of district resources.

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Dedication

I would like to dedicate this work to my children, Lilya Ashley and Kyle Christopher. Thank you for your love and support as I worked to build our foundation for academic success. I am grateful for the sacrifices of time that was made so that I could achieve this milestone. I would also like to dedicate this my parents, the late Lillian C. Elam and Robert Elam, who were my first teachers and who made sacrifices so that I would always have the best education possible.

Acknowledgments

I would like to thank God for giving me the strength and courage to complete the greatest milestone in my life. I owe everything that I am, I have, and everything that I have hoped to be to God because he helped me maintain myself when this process became overwhelming.

I would also like to acknowledge my committee chairs, Dr. George Smeaton, Dr. Rollen Fowler, and Dr. Anita Dutrow for their guidance, support, and words of encouragement because without each of you I would never have been able to complete this work. I am very grateful for the relationships that I have established with each of you and I hope that this body of work contributes to the social change that you each embody for the profession

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Chapter 1: Introduction to the Study

The transition from middle school to high school can be challenging for students. Students' experiences during the transition from middle school to high school are perceived as being more difficult primarily resulting from biological factors which impact their psychological and social behavior (Grills-Taquechel et al., 2014; Schaffhuser, Allemand, & Schwarz, 2017; Yeager et al., 2016). If not successful in overcoming a myriad of personal challenges and adjusting to high school life, these difficulties can manifest in poor academic performance, chronic absenteeism, and increased discipline incidents (Clemons, 2018). Researchers proposed that for many students, the transition from middle school to high school is more difficult than from elementary school to middle school and from high school to college (Ellenbrock et al., 2015; Emmett & McGee, 2012; Flennaugh, 2017; Grills-Taquechel et al., 2010; Willens 2013; Royal, et al., 2014). Felmlee et al. (2018) and Pharris-Ciureg et al. (2011) noted that although there may not be any indicators of academic difficulties during middle school, many students still encounter academic failure during their 9th grade year. Researchers argued a 9th grade student is five times more likely to fail a course than the same student during his or her 8th grade year (Femlee et al., 2018; Groening, 2012). Thus, transitioning from 8th grade to 9th grade can be very daunting and fraught with difficulties for even the best 8th grade students.

All over the United States students are experiencing difficulties in transitioning from 8th grade to high school, and school board personnel have enacted an academy in one district in Georgia to help alleviate their problems. A preview of the data to come shows

more than half of incoming 9th grade students have problems passing proficiency exams, attendance issues, and some have disciplinary issues. This study examined the impact of a FA on attendance, discipline, and achievement for students in a rural high school. The study has the potential for positive social change by informing teachers and administrators that improvements in 9th grader's attendance, discipline, and EOC test scores *might* have occurred because of the implementation of a FA.

This chapter will present the statement of the problem, the purpose of the study, the research questions, the theoretical framework, the significance of the study, the overview of the methodology, and the definition of key terms.

Background

The transition from middle school to high school can be difficult for some students. Being unprepared for the demands of high school can lead to decreased academic achievement, absenteeism, and discipline issues (Saddler, 2019). Saddler and Balfanz (2011) both noted that attendance and academic achievement are leading indicators of success and failure in high school. To establish a continuum of support for students who need additional support during the most critical time in a student's academic trajectory, administrators and school system personnel at the school of focus established support systems through the development of FAs.

Data from the Georgia Department of Education (2018) indicated significant numbers and percentages of 9th grade students did not demonstrate proficiency on the 2017 9th grade literature and composition and Algebra I Georgia Milestones EOC

assessments; they also had issues with attendance and behavior. Specifically, in 2017, of the 138,395 9th grade students who were tested in the state, 68,921 or 49.8% of the students did not demonstrate proficiency on the 9th grade literature and composition EOC assessment; and of the 122,037 students who were tested in 2017, 76,639 or 62.8% of the students did not demonstrate proficiency on the Algebra I EOC assessment. In the district and the school of focus, of the 374 students tested, 266 or 71.2% of the students did not demonstrate proficiency on the 9th grade literature and composition EOC and of the 328 students tested, 306 or 93.3% of the students did not demonstrate proficiency on the Algebra I EOC.

Attendance data from the Georgia Department of Education (2018) also indicated that in 2018 of the 151,950 9th grade students in the state 79,996 or 52.6% missed 5 or fewer days, while 51,947 or 34.2% missed 6 to 15 days, and 25,674 or 16.9% of the students missed over 15 days. In the district and school of focus, during the 2017-2018 academic year, 374 or 24.5% of the 1,526 students who attended the high school missed over 15 days. There were 511 or 33.5 % who missed 6 to 15 days and only 641 or 42% who missed 5 days or fewer. More specially, of the 482 9th grade students, 195 or 40.5% of the students missed 5 or fewer days, while 171 or 35.5% of the 482 students missed 6 to 15 days, and 116 or 24.1% missed over 15 days. Cole (2017) argued that a higher instance of absenteeism is associated with an increased likelihood of not meeting proficiency expectations.

Student discipline data from the Georgia Department of Education (2018) indicated that of the 581,562 discipline incidents that occurred in the state, 9th graders committed 17.1% of the incidents. In the district and school of focus, of the 816 discipline incidents, 9th graders committed 48.7% of the incidents. Wilcox (2018) noted that when there are poor social adjustments to a new school or learning environment, students might exhibit behavior problems. Along these lines, discipline may be viewed as an indicator of student achievement as well, although there is no direct correlation noted in research (Jones, 2019; Smith, 2020; Zanta, 2018).

Often, traditional high school administrators and teachers do not focus much attention on the transition to high school; however, many freshman students require support systems and additional interventions to support their academic and social success. The challenges that accompany students as they move from middle school to high school can negatively impact relationships with their peers and teachers (Femlee et al., 2018; Goodwin et al., 2012; Longobardi et al., 2016; MacIver et al., 2015; Pandina et al., 2015). Ultimately, the challenges students encounter in the transition from middle to high school can impact academic performance, leading to decreased efforts and eventually dropping out (Femlee et al., 2018; Moore et al., 2016). Therefore, the support students receive immediately following the transition from middle school to high school is especially important because it can contribute to resilience against factors that contribute to academic failure and to dropping out of high school altogether (Femlee et al., 2018; Moore et al., 2016).

There are many different ways in which teachers and administrators can support students—from instruction to personal development. Teachers and administrators have been charged with the responsibility to provide an appropriate education for all students. Teachers are also responsible for providing students with the types of support needed during their transition from middle school to high school, as their influence helps students to become more resilient against adversity (Longobardi et al., 2016; MacIver et al., 2015). For these reasons and the notion that a student's freshman year of high school establishes the foundation of their high school trajectory, many school administrators and school systems began establishing specific supports and interventions geared solely towards 9th grade students. Ellerbrock et al. (2015) believed that the implementation of transition supports, such as FAs, addresses the individual needs of students. Finch et al. (2018) and Emmett and McGee (2012) observed freshmen academies as usually autonomous programs, functioning within the context of a larger school. The theory behind the creation of these academies was to provide a more personalized and engaging learning environment (Biag, 2014; Finch et al., 2018). Additionally, FAs support students and help them academically, thus allowing them to stay on track to graduation (Biag, 2014; Clark et al., 2016).

Students in FAs usually receive extra support from teachers to feel more comfortable with the high school setting. This support is provided in an organized, caring, supportive way, and is responsive to the specific needs of students (Biag, 2014; Finch et al., 2018). Moreover, teachers working with students in the FAs should strive to respond

to the cultural experiences and needs of learners to make the transition less challenging (Costain, 2017; Ellerbrock et al., 2015; Habeeb, 2013). In the long run, FAs not only improve student engagement in the classroom and school activities, but also prevent issues with attendance, grades, self-esteem, motivation, disciplinary issues, and course, failures (Ellerbrook et al., 2015; Finch, 2018).

Studies about FAs have resulted in mixed or inconclusive findings. Some of these studies are older than 5 years to show a trajectory of research on FAs (Daniel, 2011; Irvin, 2014). On one hand, there are studies supporting the use of FAs for improving outcomes and other studies that have resulted in no differences (Chmelynski, 2004; Seng, 2014). For example, Daniel (2011) conducted a quantitative study to investigate the extent to which 9th grade students' participation in a FA improved their science performance and found that the academy did not show a significant increase in academic performance. Irvin (2014) conducted a quantitative causal-comparative study to explore the effect of a FA on 9th grade students' attendance, graduation rates, and 9th grade literature and Algebra I EOC test scores and found that students who did *not* participate in the academy had significantly higher attendance, graduation rates, and 9th grade literature and Algebra I EOC test scores than students who did.

Chmelynski (2004), on the other hand, reported that the discipline referral rate of Houston County High School in Georgia was decreased by 55% and retentions decreased by 46% after 9th grade students participated in a FA. Using a causal-comparative design, Seng (2014) examined two groups of freshmen who attended high schools in Georgia to

determine if a FA improved the literature and reading scores of freshman students over freshman students who did not attend a FA. Findings indicated no differences in the academic outcomes of the two groups.

Review of previous studies in which researchers examined the impact of FAs on student outcomes demonstrated that most, if not all studies, were conducted in urban or suburban school settings, leading authorities to believe that variables unaccounted for in these types of school locations may be the reason for the mixed or inconclusive findings (see, for example, Costa & Faria, 2015; Taylor et al., 2017; Yeager et al., 2016). However, missing from the literature—but suggested as areas for future research—are published studies which focus on the educational outcomes of 9th grade students who attend high schools located in *rural* school districts, thus leaving a gap in the literature about how successful educational practitioners in this type of setting have been with the implementation of the FA program (Beard, 2017; Bethea-Hampton & Wilson-Jones, 2018; Finch, 2015; Mosley, 2018). This study examined whether a FA implemented in a rural high school in Georgia not only improved the attendance and behavior of students, but also improved the literature and composition and algebra EOC test scores.

Throughout the scholarship on transitions between educational institutions, there have been many different threads of academic discussion. Research in the early 21st century seemed to center around the work of Dewey and his views on constructivism or "learning by doing" (Krahenbuhl, 2016; Richardson, 2003; Tobias & Duffy, 2009; Xyst, 2016). In the post-World War II era, much of the educational literature focused on *Brown*

v. the Board of Education and how integration affects transitioning (Adams, 2019; Ayscue & Woodward, 2014; Bell, 2004; Bonds et al., 2009; Chapman, 2014). Chapman (2014) posited that, although the *Brown* case changed the racial composition of high schools, there were still issues related to connectedness and student engagement. Chapman argued students who have a strong connection to their school tend to have higher instances of academic achievement.

In the early part of the 21st century, the literature branched off in a number of directions. Some authorities in the education profession focused on young children transitioning into kindergarten (see LaParo et al., 2000; Pianta & Cox, 2002; Synder, 2016) and the need for developing pre-K skills (Rosenfeld, 2017), whereas other leaders and authorities in education focused on transitioning between elementary and middle school (see Adelman & Taylor, n.d.; Romero, 2014). Some educational research agendas focused on the proper break in elementary schools and whether elementary school should end in 5th, 6th, or 7th grades (Dhuey, 2011; Johnston, 2017), whereas other educational research agendas focused on transitioning between middle and high school (see Beland, 2014; Clark, 2012; DeLamar & Graham-Brown, 2016: Ellerbrock et al., 2013).

Ellerbrock et al. (2018) and Emmett and McGee (2012) noted that the academies created a setting where teachers can provide positive support and develop strong social relationships with new high school students. Furthermore, the academies ensure that students stay engaged in school even as they face the changes associated with the transition from middle school to high school (Ellerbrock et al., 2018; Horwitz & Snipes,

2008; Riddle, 2013; Rivers, 2012; Uvaas & McKevitt, 2013). Montgomery (2015) argued that because FAs were able to focus on academics and the social–emotional needs of participating students, the academies provided a smaller connected group of educators who are able to make sure students do not fall through the cracks. George (2016) also noted that FAs provide support with the transition to high school and help students remain resilient, despite challenges.

LoPresti (2017) contended that FAs personalize freshman students' first important years by providing the support and guidance needed for success. However, missing from the literature were published studies that focus on the educational outcomes of 9th grade students who attend high schools in *rural* school districts, thus leaving a gap in the literature about how successful educational practitioners in this type of setting have been with the implementation of the FA program.

This study was needed to investigate whether the FA had any positive impact on (a) attendance, (b) behavior, and (c) the 9th grade literature, composition, and Algebra I EOC test scores of 9th grade students who attended a high school in a rural school district in Georgia. Success in 9th grade literature and Algebra I do not fully encompass academic success but are indicators of likely success in other classes since they are the foundational classes. The current FA in the rural Georgia district was created to support students who were at risk of not being successful during 9th grade. The FA was designed specifically for first-time freshman; it included an administrator, counselor, and teachers who solely served the FA, offering students a personalized learning environment that supports their

individual needs. The FA within the high school was housed in a specific hall in an effort to separate new freshman from upperclassmen. Within the academy, students receive instruction in the four core content areas. Additionally, because the high school used the block schedule, students receive instruction in 90-minute class periods.

Problem Statement

The district and one of the schools of focus implemented a FA during the 2010-2011 academic school year and believed that it was "working" to improve freshman attendance, in-school suspension, and out-of-school suspension behavior rates, and EOC test scores.

Intervention School

Within Table 1 are the percentages and frequencies of the study variables for the students at the intervention school. These descriptive statistics provide the background information to provide context for the study as well as the findings presented in Chapter 4.

Table 1

Percentages and Frequencies, Study Variables

Student Study Variables	Frequency	Percent
Absenteeism (*n* = 482)		
Missed over 15 days	116	24
Missed 6 to 15 days	171	35.4
Missed 5 days or fewer	195	40.5
Discipline (*n* =359)		
Resulted in in-school suspension	65	18
Resulted in out-of-school suspension	47	13.1
Algebra I End of Course Assessment (*n* =337)		
Beginning learner level	214	63.5
Developing learner level	101	30
Proficient level	21	6.2

Distinguished level	1	.3
9th Grade Literature and Composition Assessment (*n* =337)		
Beginning learner level	214	63.5
Developing learner level	101	30
Proficient level	21	6.2
Distinguished level	1	.3

Note: Source is from Georgia Department of Education 2017-2018 attendance, discipline, and 9th grade literature and composition and Algebra I EOC test scores. The data listed represent the attendance rate, discipline, and EOC data for the intervention school.

Nonintervention School

Within Table 2 are the percentages and frequencies of the study variables for the students at the nonintervention school. These descriptive statistics provide the background information to provide context for the study as well as the findings presented in Chapter 4.

Table 2

Percentages and Frequencies, Study Variables

Student Study Variables	Frequency	Percent
Absenteeism (*n* = 350)		
Missed over 15 days	171	14.3
Missed 6 to 15 days	115	32.9
Missed 5 days or fewer	185	52.9
Discipline (*n* = 227)		
Resulted in in-school suspension	33	14.4
Resulted in out-of-school suspension	18	7.8
Algebra I End of Course Assessment (*n* = 319)		
Beginning learner level	161	50.5
Developing learner level	122	38.2
Proficient level	29	9.1
Distinguished level	7	2.2
9th Grade Literature and Composition Assessment (*n* = 314)		
Beginning learner level	81	25.8
Developing learner level	117	37.3
Proficient level	97	30.9
Distinguished level	19	6.1

Note: Source is from Georgia Department of Education 2017-2018 attendance, discipline, and 9th grade literature and composition and Algebra I EOC test scores. The data listed represent the attendance rate, discipline, and EOC data for the nonintervention school.

The problem for this study was that researchers, for example, Mosley (2018), Finch (2015), Beard (2017) and Bethea-Hampton and Wilson-Jones (2018), have been investigating the relationship between FAs, attendance, discipline, and standardized tests for years using samples in urban areas, all the while suggesting the need for studies in

rural areas. Finch (2015) stated that, “the FA strategy has been employed more in urban settings; therefore, it is suggested that future research be conducted in rural schools.” This study builds those suggestions into a new research sample in rural areas. In doing so, this study may inform district and school officials of the impact that FAs could have on the attendance, discipline, and academic success of 9th grade students.

A number of studies focused on the educational outcomes of 9th grade students who participated in FAs, but in urban populations (see, for example, Daniel, 2011; Fletcher et al., 2016; Irvin, 2014; Chmelynski, 2004; Seng, 2014). However, missing from the literature are published studies that focused on outcomes related to the FA model in rural school districts, such as this study, where the research site is in the west central portion of Georgia. This study investigated whether, as a result of the FA, there were improvements in attendance, behavior, 9th grade literature and composition EOC test scores and the Algebra I EOC test scores of 9th grade students.

In the district and the school of focus, low student achievement, high instances of absenteeism, and increased instances of discipline issues were of concern for 9th grade students. These issues have long been factors that have an effect on high school freshman (Bethea-Hampton & Wilson-Jones, 2017; Ford, 2015). While researchers such as Bethea-Hampton and Wilson-Jones (2017) focused on a rural community, their analysis did not make direct linkages to the findings and the specificity of the rural setting. Theirs was also a narrative study, while the current study is quantitative in nature.

Another recent study (Somers & Garcia, 2017) focused on the structural and organizational factors of high school FAs and found that not all FAs implemented all of the recommended structural and organizational factors In their focus on these larger factors with high schools throughout Florida, Somers and Garcia did not focus on the specific contexts of one school and how the setting could have influenced these administrative choices. Somers and Garcia also noted that much research on FAs is over a decade old, resulting in a gap in the research.

The problem this study sought to examine was whether participation in a FA significantly improved attendance, grades in math and English, as well as significantly decreased discipline referrals of 9th grade students in a rural school district in west central Georgia. The FA was implemented in the district and the school of focus in the 2010-2011 academic year to improve the academic success of first-time freshman as they transitioned from middle school to high school. The teachers and administrators within the FA supported FA students academically, socially, and emotionally while focusing on promotion. According to data reported by the Georgia Department of Education (2018), significant numbers and percentages of students at the research site were absent from school each day. For example, during the 2017-2018 academic year, 374 or 24.5% of the 1,526 students who attended the high school missed over 15 days. There were 511 or 33.5% who missed 6 to 15 days and only 641 or 42% who missed 5 days or fewer. Therefore, over one half of the students at the site did not have perfect attendance.

Student discipline was also a concern at the high school. An analysis of the discipline referrals for the school as a whole and reported by the Georgia Department of Education (2018) indicated that during the during the 2017-2018 academic year, there were 816 discipline incidents reported to the office. Of these, 65.4 % resulted in an in-school suspension and 41.1% resulted in out-of-school suspension.

More specifically, according to data reported by the Georgia Department of Education (2018), significant numbers and percentages of 9th grade students were at the school of focus. For example, during the 2017-2018 academic year, 116 or 24% of the 482 9th grade students who attended the high school of focus missed over 15 days. There were 171 or 35.4 % 9th grade students who missed 6 to 15 days and 195 or 40.5% 9th grade students who missed 5 days or fewer. Therefore, over one half of the students at the site did not have perfect attendance.

Student discipline was also a concern at the high school of focus. An analysis of the discipline referrals reported by the Georgia Department of Education (2018) indicated that during the during the 2017-2018 academic year, there were 359 9th grade discipline incidents reported to the office at the intervention high school. Of the 359 discipline incidences, 18% resulted in an in-school suspension and 13.1% resulted in out-of-school suspension.

Additionally, academic success on standardized tests was of concern. An analysis of the EOC assessment data reported by the Georgia Department of Education (2018) indicated that during the 2017-2018 academic year, 337 9th grade students were

administered the Algebra I EOC assessment at the intervention high school. Of the 337 9th grade students tested, 214 students or 63.5% performed at the beginning learner level, 101 students or 30% performed at the developing learner level, 21 students or 6.2% performed at the proficient level, and 1 student or 0.3% performed at the distinguished level.

An analysis of the EOC assessment data reported by the Georgia Department of Education (2018) indicated that during the 2017-2018 academic year, 424 9th grade students were administered the 9th grade literature and composition assessment at the intervention high school. Of the 424 9th grade students tested, 118 students or 27.8% performed at the beginning learner level, 191 students or 45% performed at the developing learner level, 97 students or 22.9% performed at the proficient level, and 18 student or 4.2% performed at the distinguished level.

Purpose of the Study

This study was quantitative in nature. As part of the research design, four factors of students who did, and did not, participate in a FA were examined: attendance, discipline (which included in-school suspensions and out of school suspensions), the 9th grade literature and composition EOC scores, and the Algebra I EOC scores. The purpose of this study was to examine the intervention's impact on 9th graders' attendance, behavior, and EOC test scores in the areas of literature and composition and Algebra I in comparison to a control-group school that did not implement the 9th grade FA.

I used a causal-comparative (ex post facto) research design in order to document whether any improvements/changes in the dependent variables might be *attributed* to the

independent variable (i.e., the FA). Causal-comparative designs parallel experimental designs but there are also many distinct differences between them (Gay & Mills, 2016). Gay and Mills (2016) noted that a causal-comparative research design is a nonexperimental design in which there is no manipulation of the independent variables. However, the design afforded me the opportunity to study educational experiences that have already occurred and cannot be studied through an experiment. In contrast, Gay and Mills noted that true experimental design research uses pretests and posttests while controlling for all internal and external threats to validity. All students who attended the high school during the pre- and post-implementation period were considered research site participants as part of the FA.

There were two dependent variables for the study. The dependent variables were (a) students who attended 9th grade without a FA and (b) students who attended 9th grade with a FA. The first independent variable that was examined in this study was the attendance rates of the 9th grade students who participated in the academy during the 2016-2017 and the 2017-2018 academic years versus students who did not participate in the FA during the same years. The second independent variable was discipline referrals of 9th grade students who participated in the academy during the 2016-2017 and the 2017-2018 academic years versus students who did not participate in the FA during the same years. The third and fourth independent variables that were examined in this study were the EOC scores for 9th grade literature and composition and Algebra I of the 9th grade

students who participated in the academy during the 2016-2017 and 2017-2018 academic years versus students who did not participate in the FA during the same years.

The findings from this study will inform teachers and administrators in the district that any observed improvements/changes in the dependent variables *might* be attributed to the FA, but that a more rigorous randomized control trial study of the FA would have to be conducted to establish, more clearly, whether improvements/changes in the dependent variables were truly caused by the FA intervention. This study may also add to the body of literature about whether a FA implemented in a rural school district was successful at improving important educational variables related to success in school.

This study was needed in order to determine the impact of the FA on the attendance, behavioral, the 9th Grade Literature and Composition and the Algebra I EOC test scores of 9th grade students who attend high schools located in one rural school district in Georgia. It is noted that when students transition from middle school to high school, the social, emotional, and academic supports needed are often overlooked or inadequately implemented (Cuban, 2013). Students then entered traditional high schools, which have a "sink or swim" mentality, and lacked the developmental, social, emotional, and academic support needed for academic success (Hecker et al., 2014).

This study has implications for positive social change because students in the district, who earn a high school diploma, had the ability to improve their livelihood as adults. Further, an overall increase in the high school graduation rate can help to improve students' future chances for employment and for furthering their formal learning at trade

schools, at colleges, and at universities (Deming et al., 2016). Improving the overall high school graduation rates may also help to reduce crime and poverty (Gonzalez, 2015). This study also has financial implications as the results may help to reduce the burden that dropouts place on taxpayers in millions spent each year for healthcare, housing, and care for inmates (Milenky, 2016).

Research Questions and Hypotheses

The following research questions guided the study, and the following hypotheses were tested:

RQ1: Does the attendance in Freshman academy decrease absences in attendance?

$H1_0$: There is no statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H1_a$: There is a statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ2: Does the attendance in a Freshman academy decrease discipline incidences?

$H2_0$: There is no statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did

not participate in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H2_a$: There is a statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ3: Does the attendance in a FA positive affect Literature and Composition scores?

$H3_0$: There is no statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H3_a$: There is a statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ4: Does the attendance in a FA positive affect math scores?

$H4_0$: There is no statistically significant difference between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H4_a$: There is a statistically significant difference between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

Theoretical Framework

Eccles and Midgely's (1993) stage-environment fit theory has been applied in quantitative studies similar to this one (see for example, Buie, 2015; Finch et al., 2018; George, 2016; Hernandez, 2012; Kmiec, 2007; Seng, 2014; Smith, 2018; Snipes, 2015; Widner, 2010) and served as the theoretical framework for this study. Eccles and Midgely's stage-environment fit theory was appropriate for the current study for three reasons. First, the theory focuses on the challenges that students encounter as they transition from middle school to high school (Ellerbrock & Kiefer, 2014). The theory specifically considers the mismatch between students' individual characteristics and the characteristics of the classrooms and how it impacts their motivation to persist until completion (Booth & Gerard, 2012; L'Esperance et al., 2013; Sirota, 2017).

Eccles and Midgely's (1993) stage-environment fit theory also focuses on challenges associated with adolescence and students' trajectory during this period of developmental growth. The theory accounts for some of the specific causes of challenges students encounter between their teachers and their parents, challenges that often lead to a decline in motivation, self-confidence, interest in school, attendance, and ultimately to academic failure and school dropout (Bornsheuer et al., 2011; McCallumore & Sparapani, 2010; Renda & Villares, 2015).

Nature of the Study

This study will use a causal-comparative research design and is also referred to as an ex post facto research design (Bakker & van Eerde, 2015; McCusker & Gunaydin, 2015). A causal-comparative design is used when the event of interest has already occurred (Bakker & van Eerde, 2015; McCusker & Gunaydin, 2015). It is also used when the occurrence of events and/or interventions occurred in the past, meaning that the independent variable already happened (or is now in place) and the change data (related to DVs) was already collected/recorded and stored in an archival system. A quasi-experimental design would not have worked for this study because direct manipulation of the independent variable cannot be conducted and because the initial implementation of the academy occurred in the past and is not being conducted in real-time.

The nature and intent of this study was to answer whether a FA implemented in a rural high school in Georgia not only improved the attendance and behavior of students, but also improved the Literature and Composition and Algebra EOC test scores. I used

archival data provided by the school district for analysis of the data. For the inferential data analysis phase, I conducted a two-way multivariate analysis of variance (MANOVA) to compare the two groups for each dependent variable. A two-way MANOVA is the most appropriate statistical test for this current research study because the study consists of more than one dependent variable (Hewitt & Cramer, 2014; Pagona, 2013). In using a MANOVA for analysis, I was able to see if, in fact, there was a statistically significant difference between 9th grade students who attended a school with a FA and students who did not attend a school with a FA, for each of the dependent variables.

Definitions

Attendance rate: The number of days students are present divided by the sum of the days present and the days students are absent (Georgia Department of Education, 2020).

Academic success: The attainment of knowledge, skills, and competencies in a satisfactory and persistent manner leading to successful post-college performance or other educational outcomes (York, Gibson & Rankin, 2015).

Adolescence: An adolescent is an individual between the ages of 10-18 (Haynes, 2017).

Discipline: A negative or disruptive behavior, which interrupts instruction and demands the teacher's immediate attention (Bethea, 2016).

Dropout rate: The measure that calculates the number of students who drop out of school without gaining a high school diploma. A student is coded as a dropout because

they left school due to marriage, expulsion, incarceration, academic failure, military duty, adult education, pregnancy, lack of attendance, and serious illness (Georgia Department of Education, 2016).

Freshman academy: A small learning community with in a large school that consist of a team of teachers who share a common group of students and meet on a consistent basis to discuss student progress and ways to assist struggling students (Habeeb, 2013).

Graduate rate: The number of students who graduate with a general education diploma divided by the number who dropout in grades 9-12 from specific years, including graduates and completers (Georgia Department of Education, 2016).

Middle school: Middle Schools typically serve students from grades 6-8, but can also include grade 9 (Haynes, 2017).

Retention rate: The number of students who enter high school in the 9th grade and remain enrolled in order to move on to the next grade level (Georgia Department of Education, 2016).

Transition: The act of moving students from one school setting to the next and−on a smaller scale−from one-grade level to the next (Haynes, 2017).

Assumptions

The scope of this study was limited to the students who participated in the FA in one school district and at one high school in Georgia. The assumptions of a study are the items I took for granted (Marshal & Rossman, 2014). The first assumption for this study

was that students tried their best. The second assumption was that the data were correct. The third assumption was that the disciplinary actions relate to those students in the FA. The fourth assumption was that that all teachers who trained in the use of the FA were trained effectively and all implemented the model consistently and with fidelity. The fifth assumption was that all the students were aware of the behavior policies set forth by the school district. The sixth and final assumption was that the 9th grade students who participated in the FA, focusing on years 2016-2018, all had similar educational experiences and were taught in Language Arts and Composition and in Algebra from the same curriculum and benchmark standards promoted by the Georgia Department of Education (see Gadoe.org).

Scope and Delimitations

The scope of the study focused on two high schools in a rural school system in the west central portion of Georgia. One of the high schools had an established FA while the other high school did not. Within the FA there were 12 teachers, a guidance counselor, and an administrator.

Creswell (2014) defined delimitations of a study as boundaries of a study that were made by me. One delimitation of this study was that only quantitative data were collected and analyzed to determine the impact of the FA on the attendance, discipline referrals, and on the Language Arts and Composition and on Algebra I EOC test scores. A second delimitation was that the study used only data for one group of students who participated in the FA during the 2017-2018 academic year and one group of students who did not

participate in the FA during the 2017-2018 academic year. A third delimitation was that the study was conducted in only one district/region of one state.

Limitations

Limitations of a study were those factors or inconsistencies over which I had no control (Creswell, 2014). One limitation of the study was that teachers may have used a variety of methods and strategies that differ from school to school. Although, the FA was focused on promotion and providing students with a solid foundation during their freshman year, all teachers were charged with providing instruction that is rigorous, relevant, and engaging. Second, I had no control over the quality of instruction received by students, although students received instruction in the same district at two different schools. Students who attended the intervention school participated in the FAs and students who attended the nonintervention school did not. Third, because the event has already taken place, there was no way to design an experimental study that would allow me to manipulate the independent variable or randomly assign participants to treatment and control groups.

Significance

Each year in the United States, more than 1.2 million students drop out of high school and more than 7,000 students drop out each school day (Osler & Waden, 2013). According to the National Center for Educational Statistics (2017), one third of the students who drop out of high school do so in 9th grade. Dropping out of high school has negative consequences for both individuals who leave school and for America's taxpayers.

For example, according to the United States Department of Labor (2018), the unemployment rate for high school graduates is about 8%. On average, high school dropouts who are employed earn about $7,000 less than their counterparts with a high school diploma. Also, while high school graduates across the country earn an average annual salary of about $27,000, individuals who failed to earn a high school diploma earn an average salary of about $20,00 each year.

Over the next 10 years, high school dropout may cost American taxpayers about $3 trillion in tax revenue (Clemson University's Center for Dropout Prevention Center/ Network, 2017). Literature from the Clemson University's Center for Dropout Prevention Center/ Network (2017) suggested that high school dropouts are also six times more likely to be locked up in juvenile detention centers, jails, and prisons. Of America's 6,851 inmates, 75% are high school dropouts. While it costs state governments about $13,000 annually to educate one individual, the cost to care for an inmate is about $28,000, which also provides an enormous tax burden on American taxpayers. High school dropout poses numerous additional tax burdens population (Clemson University's Center for Dropout Prevention Center/ Network, 2017).

Overall, when compared to high school graduates, dropouts are generally less healthy. Because they are less able to secure full-time jobs, which would allow for insurance benefits, they are more likely to depend of governmental assistance for health care population (DeRidder, 2014). Clemson University's Center for Dropout Prevention Center/ Network (2017) reported that each year, high school dropouts cost American

taxpayers about $7 billion in Medicaid. High school dropouts are 20 times more likely to become parents before they reach the age of 17 than those who remained in school population (Hickman et al., 2017). Children of high school dropouts pose additional problems for taxpayers, who must bear the burden of providing food, health care, and housing for many of the dependents (Hickman et al., 2017; Rumberger, 2011).

The purpose of this study was to examine whether the FA impacted 9th graders' attendance, behavior and EOC test scores in comparison to 9th graders who did not participate in a FA. The current study may be significant for several reasons. First, the results may help parents, middle school teachers and administrators gain further insight into various impacts that students' participation in freshman academics has on the transitioning of students from middle school to high school. Second, the results may help stakeholders design strategies so that students are better able to adapt during their first year of high school. Third, district administrators may use the results of this study to determine if FAs are a viable resource to continue to fund, and if negative results are found, the district can look further to determine why the results were found in the current FAs. Finally, this study is significant because it may add to the body of literature on the role of FAs during students' transition from middle school to high school.

Summary and Transition

Chapter 1 began by presenting the problem that the current study addressed, which was the attendance, behavioral, and academic outcomes of 9th grade students who attend high schools located in one rural school district in Georgia. A quantitative methodology

was used to collect data to answer the research questions guided the study examining whether the attendance in a FA decrease absenteeism, discipline incidents, while positively affecting academic achievement. Eccles and Midgely's (1993) stage-environment-fit theory served as the theoretical framework for the current study. Findings from this study could help parents, middle school and high school teachers, and administrators gain further insight into various impacts that students' participation in freshman academics has on the transitioning of students from middle school to high school. It also added to the body of literature, which focused on the role of FAs during students' transition from middle school to high school by including a study in a rural setting.

This quantitative research study was organized into five sections. Chapter 1 presented the statement of the problem, the purpose of the study, the research questions, the theoretical framework, the significance of the study, the overview of the methodology, and the definition of key terms. Chapter 2 presents information about the literature search strategy, theoretical framework and a synthesis of the research literature related to middle school to high school transition and the FA. Chapter 3 presents the methodology and the research design that was used to carry out the study. Chapter 3 presents information about the population and the sample for the study, and the method for collecting and analyzing the data. Chapter 4 presents data analysis information and results. Chapter 5 interprets the findings, discuss the limitations of the study, provide recommendations for future research and the implications.

Chapter 2: Literature Review

Students' transition from middle school to high school is often problematic (Beland, 2014; Clark, 2012; DeLamar & Graham-Brown, 2016: Ellerbrock, Demon, & Owens, 2013). One reason for the difficulty among some students during the transition is related to biological changes associated with the change from puberty to adolescence (Booth & Gerard, 2014; Ellerbrok & Kiefer, 2014; Felmlee et al., 2018; McDowell, 2013). Another reason is because high school teachers expect students to demonstrate more independence than they did in middle school (Booth & Gerard, 2014; Ellerbrock & Kiefer, 2014; Kim et al., 2015). Moreover, students are expected to demonstrate mastery of higher-level content area standards in high school (Ellerbrock et al., 2015; Jackson & Schulenberg, 2013).

The complexity of students' transition from middle school to high school can negatively impact students' attitudes, their relationships, and their academic performance (Lizar, 2017; LoPresti, 2017). The transition can ultimately impact students' decisions on whether to drop out out of high school altogether or to persevere until graduation (Ellerbrock et al., 2015). Therefore, it is important for stakeholders to understand the type of support that students need during their transition. Researchers advocate the implementation of FAs as a way to improve the overall outcomes of high school students.

Wilder et al. (2009) defined FAs as "programs for freshman (9th grade) students that are designed to provide the strategies and the support that are needed to make a successful transition from middle school to high school" (p. 11). Emmett and McGee

(2012) wrote that FAs are small, structured learning communities within high schools that offer academic, social, and emotional support to 9th grade students who have deficiencies that inhibit their school performance. However, few studies have been conducted on the impact of FAs on student outcomes. For example, Guillaume (2013) conducted a quantitative study to determine the impact of students' participation in a FA. Participants indicated that their participation in the academy improved their comfortability with school and their motivation to succeed. McMillan (2012) did not find a statistically significant difference between 9th grade students who participated in the FA and those who did not but suggested that future studies track freshmen during their trajectory through high school. Likewise, when Luna (2017) conducted a quantitative causal-comparative study to investigate the impact of students' participation in freshman academics on the standardized test scores of 9th grade students in Texas, the findings did not indicate a statistically significant difference in the scores of students who participated in the academy and those who did not.

The purpose of Chapter 2 is to present the literature which focuses on the middle school to high school transition and includes literature relevant to dropping out and graduation, FAs, and research studies, which focus on the impact of FAs on student outcomes.

Literature Search Strategy

In order to review the literature from peer-reviewed journals, I used the following databases: Education Source, Google Scholar, ERIC, ProQuest, and SAGE. Book

resources were included in this review to a lesser extent. The following keywords were used: *adolescence, dropout rate, transition, middle school academies, high school academies, psychological and social challenges, freshman intervention, developmental support for adolescence, social support for adolescence, emotional support for adolescence, academic support for adolescence, needed for academic success,* and *stage-environment fit theory*.

Theoretical Foundation

Eccles and Midgely's (1993) stage-environment fit theory served as the theoretical framework for the current study. During early adolescence, students also tend to have more conflict with their school environment due to a desire for more autonomy and control. Eccles and Midgely also suggested that adolescents' behavioral, motivational, and mental health challenges evolve from the disconnect between the individual characteristics that they bring to their social environments and the established characteristics of school environments. When the school environment and the characteristics of the individual characteristics of the student are not aligned, their psychological needs are not met and consequently, students are not motivated to demonstrate higher levels of performance (Eccles, 2012). Further, when the psychological needs of 8th grade students are not met during junior high school, their motivation, interest, performance, and behavior also declined as they transition to high school as 9th grade students (Ellerbrock et al., 2015; Witherspoon & Ennett, 2011).

Eccles and Midgley (1993) provided explanations for the challenges students face during their middle school to high school transition, which they refer to as a mismatch between early adolescence and the classroom environment. First, the researchers examined how environmental factors influence adolescents' motivation. Eccles and Midgley suggest that smaller school environments may be more advantageous for adolescent students, especially for those who are at risk. In addition, high teacher efficacy is significant for positively influencing students' motivation during the middle to high school transition. They further propose that problems relating to student motivation during adolescence are related to changes in the learning environment rather than how students develop. In addition, the stage-environment fit theory suggests that environmental causes may negatively impact students' transition from middle school to high school. Therefore, teachers should take account the contemporaneous needs of their students and provide less structured classroom structures, which foster learners' growth from dependence to independence.

Such accommodations are provided by initially providing students with optimal levels of structure and then transitioning into less structured environments that require more cognitive and social tasks. Overall, students should be provided developmentally appropriate environments that positively impact their self-perceptions and their educational performance, which may be accomplished by focusing on the developmental needs of the early adolescence, educational environment that are developmentally appropriate for meeting the needs and stimulating the development, addressing common

changes experienced by adolescents during their middle school to high school transition and by addressing the physiological, cognitive, and psychological needs of the students during this time (Ellerbrock & Kiefer, 2014). Eccles and Midgely's stage-environment fit theory also addresses the relationship that adolescents have with their teachers during this period of developmental growth.

Eccles and Midgely (1991) wrote that during adolescence, relationships between students and their teachers are more stressful. The stress is related to control and autonomy. While students' relationships with their teachers traditionally have been from the top down, as students mature, they desire to become more independent. The stage–environment fit theory suggest that the strained relationships are due to a poor fit between the students' desire for increasing independence and teachers' desire to provide more structure and control (Ellerbrock et al., 2015; Felmlee et al., 2018; McHugh et al., 2013). In addition, social changes when transitioning to a new school lend to the conflict. Such influences may lead students to withdraw, become isolated causing a regression in academic achievement and motivation. High school impose more academic rigor and do not consider the interest and abilities of individual students. The mismatch between the school, teachers, and students during adolescence may also negatively impact students' self-esteem and cause decreased learning and motivation (Eccles & Midgley, 1989; Eccles & Roeser, 2011; Ellerbrock et al., 2015).

Literature Review Related to Key Variables

The transition from middle school to high school can be an exciting and difficult time for some students. The understanding that the first year of high school is a critical time for students mandates the need for school administrators and school board personnel to create a system of support (Felmee et al., 2018). The need to assist students with their transition from middle school to high school have led to the implementation of FAs (Steinbery & Quinn, 2016). FAs afford teachers and administrators the opportunity to respond to the diverse needs of struggling students potentially leading to better academic outcomes, decreased discipline incidents, and decreased absenteeism (Longobardi et al., 2016). In this section, I review literature related to key variables of the purposed study to demonstrate how the difficulties of the transition from middle school to high school may have led to the creation and implementation of a FA in a rural school district in Georgia.

The Middle School to High School Transition

The transition from middle school to high school is a unique time for students. This time can be especially difficult for students because as students transition from middle school to high school, they are also simultaneously transitioning from puberty to adolescence. Adolescence is the period of physical, intellectual, social, and emotional growth, which occurs between the ages of 15 and 17 (Beland, 2014; Curtis, 2015). During the period of adolescence, students tend to struggle with their identity, moral values, and peer pressure. Furthermore, the first year of high school can be especially challenging for students because they are required to meet more rigorous standards with less teacher

support (Beland, 2014; Curtis, 2015). The change in students' human development as well as in their learning environment can create stress, depression, anxiety, and lessened self-confidence (Freeman & Simonsen, 2015; Kim et al., 2015). How well students adjust during the transition can also impact their relationships with their parents, their new classmates, and their teachers (Cook, 2015).

Hines (2007) noted that the developmental stages of adolescence are defined as a fundamental cognitive, emotional, and psychosocial transformation that affects the performance of students and their academic journey. Martinez et al. (2011) posit that adolescence is a crucial developmental stage that is characterized by significant changes and potential difficulty and turmoil. Besides, the authors remarked that the developmental stage of adolescence involves multiple factors and changes such as social influence and peer relationships that have an impact on behavioral and emotional functioning. Therefore, support from peers, parents, and educators are critical at this particular stage of life (Felmlee et al., 2018; Mason et al., 2016).

Ninth graders who successfully navigate through this trajectory are far more likely to graduate from high school than those who do not experience academic success during their freshmen year. Supporting the successful transition from middle school to high school for African American students is an area of concern for stakeholders due to the dropout crisis. African American students have trouble with the transition to high school due to stereotyping, lack of support, cultural schisms, and ethnic identity exploration (Holcomb-McCoy, 2011; McKee & Caldarella, 2016). Consequently, the importance of

the first year of high school has prompted educators across the country to develop support programs that are designed to support 9th grade students.

According to Hanewald (2013) and Felmlee et al. (2018), transitioning to high school is often marked with declining motivation and increased disengagement especially among the low performing youths. It is for this reason that attempts are always being made to explore the concept of transition and help learners to easily move from one level of study to the other (Felmlee et al., 2018; Hanewald, 2013). The overall intention is to ensure that students move through their academic journey without significant challenges (Ellerbrock et al., 2015; Felmlee et al., 2018; Hanewald, 2013).

Previous studies have shown that transition is a point where most students face challenges that may affect their progression to the next level of education (e.g., Ellerbrook & Keifer, 2013; Felmlee et al., 2018). Neild (2009), for instance, noted that many students are at an increased risk of getting stuck as they transition to high school. Nield added that when learners are not able to smoothly transition to high school or post poor grade during their academic journey, they may be at a greater risk of dropping out of school. Emmett and McGee (2012) concurred by stating that the negative issues and challenges associated with transition are more common among students who are under prepared to move to the next level of their academic journey.

Furthermore, these specific issues and challenges are common among those who suffer from some form of deficits such as the lack of support from parents, peers, and teachers (Bhargava & Witherspoon, 2015; Emmett & McGee, 2012; MacIver et al., 2015).

It is for this reason that minority students tend to account for the largest population of learners who face challenges as they transition from middle school to high school (Benner et al., 2017; Bhargava, & Witherspoon, 2015; Emmett & McGee, 2012).

Consequently, such students require additional support from parents and teachers so that they can successfully transition to higher levels of education, stay in school, and eventually graduate (Emmett & McGee, 2012; Felmlee et al., 2018). Futris et al. (2012) concur that minority and vulnerable groups require support when they encounter the adverse effects of the transition process so that they can remain in school. Also, they need continuous support so that they do not experience the danger of academic failure as they move from middle school to high school (Ellerbrock et al., 2015; Emmett & McGee, 2012; Felmlee et al., 2018; Futris et al., 2012).

The available research evidence suggests that the transition from middle school to high school calls on leaders to assist students as they adapt to the new learning environment, academic demands, new peers, and new teachers (e.g., Ellerbrock et al., 2015; Felmlee et al., 2018; Hanewald, 2013; Roybal et al., 2014; Uvaas & McKevitt, 2013). Hanewald (2013) posits that the changes that occur during the transition process create an environment that tends to be teacher centered and lonely for the student and creates a setting where the learner may feel less involved in different classes and school activities.

Longobardi et al. (2016) and Uvaas and McKevitt (2013) concur by noting that most new high school students feel that their teachers are demanding more from them and

are less supportive of their academic journey. In the long run, such factors and perceptions drive learners to feel overwhelmed. Besides, the negative attitude and unwelcoming environment can have the adverse effect on student's academic choices, the desire to take part in post-secondary education, and engagement in extracurricular activities (Ellerbrock et al., 2015; Roybal et al., 2014; Uvaas & McKevitt, 2013). While analyzing the issue of transition, Chao et al. (2014) and Felmlee et al. (2018) reported that the environment that students encounter when they move from middle school to high school could result in adverse outcomes that include low self-esteem, maladjustments, high-stress levels, and poor academic performance.

Other researchers have considered the transition to be a critical crossroad that influenced the academic future of learners (Akos, 2006; Felmlee et al., 2018; Frey, Ruchkin, Martin & Schwab-Stone, 2009; Langenkamp, 2011). Femlee et al. (2018) and Akos (2006) noted that as young students move from middle school to high school, they go through a crossroad that is defined by increased expectations from teachers, minimal teacher attention and scaffolding, heterogeneity, and large classrooms. Additionally, Femlee et al. (2018) and Frey et al. (2009) added that the transition process is synonymous with changes in peer group concerns and perceptions about social acceptance, self-esteem, and academic performance. This journey across different school levels and settings could be a critical academic turning point for students (Akos, 2006; Felmlee et al., 2018; Langenkamp, 2009; Langenkamp, 2011; Smith et al., 2008).

Since 2015, there have been no journal publications on minority students and FAs. This literature has shown to be older than 5 years and is discussed in this section. Most recently, Lance (2019) conducted doctoral dissertation research on African American males who experienced a FA that social supports through extracurricular activities, supportive adults and parents helped African American students successfully complete 9th grade and transition to tenth grade. Letrello and Miles (2003) posited that transition tends to be tougher for minority students and those with disabilities and learning difficulties. The researchers noted that learners from minority groups including students with special needs suffer from a greater risk of experiencing academic and adjustment problems as they transition from middle to high school. Holcomb-McCoy (2007) concurred by stating that when disadvantaged students are moving from middle school to high school, that their anxiety and developmental challenges are further complicated by normal changes such as social and emotional development, puberty, the growing importance and complexity of peer relationships and the increasing importance of higher order cognitive skills.

Students with special needs often report lower grades and decreased academic motivation because of the external and internal changes that they face in their journey from middle school to high school (Cauley et al., 2003; Darmody, 2008; Holcomb-McCoy, 2011). Much of the literature regarding students with special needs and FAs were older than 5 years; however, the research has shown that FAs benefit student with special needs (Letrello & Miles, 2003; LoPresti, 2017)

Femlee et al. (2018) and Smith et al. (2008) noted that educators were always trying to understand the factors that influences the transitioning process with the intention of helping learners to move from middle school to high school successfully. Smith et al. (2008) contended that educators had expressed concern that many students struggle as they transition from middle school to high school because of many factors. The commonly cited reasons included academic expectations, changes in attendance policies, as well as the lack of understanding and knowledge about the importance of earning credits (Faul et al., 2007; Femlee et al., 2018; Smith et al., 2008).

Bishop (2019) and Smith et al. (2008) argued that the new way in which high school students earn credits and view graduation is a major transition issue that affects their transition. Smith also reported that educators are worried that some new students do not have a clue about the difference in the academic policies at middle school and high school levels. In other cases, learners do not have an idea that course completion and their cumulative performance in high school determined their final credits (Smith et al., 2008). In such cases, they ended up struggling to fit into the high school setting and curriculum (Smith et al., 2008).

Rice et al. (2011), on the other hand, reported that educators were concerned that the involvement of parents in choosing courses for their students was one of the factors that was affecting the transition process, and that the practice denied students the freedom to select courses that they pursued in high school. Rice (2001) cautioned that without proper guidance, parents might end up choosing courses that were not appropriate for the

interest and patterns of the study of the learners. In the long run, their decisions not only made the transition process more cumbersome but also impacted negatively on academic performance (Rice, 2001), and Bhargava and Witherspoon (2015) echoed this as well in a later study. Therefore, parents and students needed multiple opportunities to explore, experience, and discussed the educational opportunities, similarities and difference in middle school and high school so as to make the transition process successful (Bhargava & Witherspoon, 2015; Hanewald, 2013; Rice, 2001; Smith et al., 2008).

Bethea (2016) conducted a study to identify strategies that school officials should use to help students as they transition to high school. Administrators and teachers have focused on academic achievement, discipline, and attendance as areas that students need help during their transition to high school. The rationale for the study was to identify the strategies that support students as they transition from middle school to high school. Interview questions relating to demographics, academic achievement strategies, discipline, and student attendance in freshman transition programs were developed. Recurring themes that occurred during interviews was used to analyze data that was collected. The findings revealed that the adjustment to high school and mentoring, data driven instruction, intervention programs, small learning communities, building rapport with students, and flexible scheduling were the best strategies that would support as they transition to high school.

As a result of the study, Bethea recommended that future studies on the benefits of freshman transition programs be conducted including diverse geographic areas and

examining the viewpoints of the district superintendent. An implication from the results of the study argued that district leaders should support interventions that monitor students' academic achievement, discipline, and attendance through in-school programs.

Support for 9th Grade Students

Students need support as they transition from middle school to high school (Ellerbrock et al., 2015; Ellerbrock et. al., 2014; Schoeneberger, 2012; Waters, Lester, & Cross, 2013. African American students especially needed support during this transition as they are most likely to show a decline in their academic performance (Hanewald, 2013; Lopez-Tamayo et al., 2016). Researchers suggested that there are several challenges that negatively impact 9th grade students' academic performance after they transition from middle school and these challenges could disproportionately impact African American students (Lopez-Tamayo et al., 2016). For example, as 8th grade students transition into 9th grade, they also tended to transition from puberty into adolescence and experience a host of developmental and emotional issues (Gönültaş et al., 2019). Hanewald (2013) argued that the failure of educators and parents to meet the needs of students during the transition process can lead to a decline in scores in the core content area.

Another concern for 9th grade students in rural areas was that they often moved from smaller middle school to larger high schools. Ninth grade students may also lack routines and foundational skills they needed in order to be successful in high school. Further, 9th grade students' transitioned from being the oldest to the youngest students. As

such, it is imperative for educators, parents and other education stakeholders to understand and work towards addressing the specific needs of transitional students.

Other researchers have identified the socio-emotional needs and wellbeing of students as one of the factors that can influence the transition from middle school to high school (Ellerbrock et al., 2015; Ellerbrock & Keifer, 2010; Felmlee et al., 2018; Martinez et. al., 2011; Siddall et al., 2013; Wang & Eccles, 2012). Furthermore, researchers have reported that the feeling of loneliness can increase across the first two years of high school education especially among African Americans. Other researchers have indicated that depression usually increases among students who move from middle school to high school (see, for example, Barber & Olsen, 2004; Ellerbrock & Kiefer, 2013; Gönültaş et al., 2019; Goodwin et al., 2012; Liu & Tein, 2005; Meadows et al., 2006; Roberts et al., 2009; Suldo & Shaunessy-Dedrick, 2013).

Longobardi et al. (2016), on the other hand, posited that transition is often defined by a reduction of emotional support leading to the feeling of exclusion. The researchers also noted that students require strong relationships and emotional support so that they can deal with various issues that affect the transition process such as the experiences of victimization, the need for peer gratification, and changes in the learning environment (Longobardi et al., 2016). These strong relationships with parents not only make the transition process less cumbersome but also fostered a sense of support and belonging among learners.

In the long run, it helps students to take up the positive opportunities in the new context of establishing more gratifying and satisfying relationships (Longobardi et al., 2016). Whether there is a change in familial relationship or not, it is undeniable that students require support from their parents as they face the developmental trajectories associated with moving from middle school to high school (Longobardi et al., 2016). Also, studies have underscored the importance of relationships and social convoys in the ability of students to face subsequent developmental trajectories and succeed in high school (Barile et.al., 2012; Longobardi et al., 2016; Wang & Eccles, 2012).

Felmlee et al. (2018) and Benner (2011) posited that school transitions often disrupt student's relationships with school personnel since the process entails getting into a new learning context with a different set of teachers. Furthermore, these new set of teachers at high school may also have different expectations for and perceptions of their students. Langenkamp (2011) reported that students who feel that their teachers do not support them as they move from middle school to high school are at greater risk of suffering from stress and anxiety and engaging in delinquent activities. Also, these students tended to show negative behavioral tendencies such as aggressive beliefs, lower academic motivation, and violent traits (Almeida & Wong, 2009; Benner, 2011; Ellerbrock et al., 2015; Langenkamp, 2011).

Over the long term, these students could struggle academically both during and after the transition phase of their education (Kelmlee et al., 2018). By contrast, students who developed positive relationships with their teachers and received their support are

likely to feel more motivated (Kelmlee et al., 2018). Moreover, these learners experienced positive academic and socio-emotional adjustment both in high school and at later stages of their education (Almeida & Wong, 2009; Carrington-Nord, 2019; Langenkamp, 2011). Therefore, educators needed to work towards developing and sustaining positive relationships with new high school students so that the transition process can become less challenging.

While addressing the needs of new high school students, Peters (2010) noted educators of both middle and high school have a critical role to play in supporting the transition of all the students. The middle school teachers have a duty of preparing the students socially and academically for high school (Longobardi et al., 2016; Peters, 2010). Besides, they should share valuable information such as those related to academic expectations so that students know what awaits them in high school (Longobardi et al., 2016; Peters, 2010). The high school teacher, on the other hand, has a duty of orienting new students and helping them to understand the values, ethical considerations, and cultures that define their new school context (Longobardi et al., 2016; Peters, 2010).

There is a broad range of duties that educators must undertake so that they can respond to the physical, emotional, social, and academic needs of new high school students (Longobardi et al., 2016; Siddall, Huebner, & Jiang, 2013). First, teachers should ensure that new students experience success in learning so that they can become engaged in class and education activities (Almeida & Wong, 2009; Langenkamp, 2011; Longobardi et al., 2016). Second, it is the duty of teachers to identify the vulnerable student before

they go to high school and proactively address threats that may affect the academic progress and well-being such as offering academic and transitional support. Third, educators needed to have a process that can be used to monitor the progress of students as they transition from middle school to high school. For instance, the teacher may observe and monitor how minority students acquire essential competencies of the curriculum and interact with fellow students (Peters, 2010). The overall intention was to minimize the factors and threats that may make the transition process cumbersome.

Other researchers have argued that teachers can respond to the needs of new and minority high school students during the transition by knowing what learners can do and make plans for future learning and teaching processes (Ellerbrock, 2012; Ellerbrock et al., 2015; McCallumore & Sparapani, 2010). Peters (2010) posited that teachers have a duty of determining the interest and strengths of their students so that they can shape and model the learning setting and process to suit the identified learning needs. Every student comes to high school with unique experiences, competencies, dispositions, and knowledge that may affect the transition process and determines their academic performance (Almeida & Wong, 2009; Langenkamp, 2011; Longobardi et al., 2016; Peters, 2010).

By understanding these factors, teachers were able to explore the potential of the learners in regard to learning and come up with strategies that made the transition process less challenging (Langenkamp, 2011; Longobardi et al., 2016; Peters, 2010). The process entailed looking at the student's schooling history and providing a culturally sensitive

setting that leads to improved academic motivation (Langenkamp, 2011; Longobardi et al., 2016; Peters, 2010).

The Impact of FAs on Student Outcomes

FAs are self-contained learning communities for 9th grade students that operate within a school. FAs were first incorporated during the mid-90s in order to address students' academic and social needs. FAs emerged as a result of mandates from the NCLB Act of 2002 that placed a new focus on student achievement and graduation rates (Steinberg & Quinn, 2016). Additionally, FAs were created in order to address the challenges of 9th grade students, whose national academic performance declined significantly after leaving middle school. The purpose of FAs was to provide a more nurturing environment and to separate 9th grade students from the other classes of students (Cook, 2015; Corradetti et al., 2013).

One way through which educators can keep students in high school is to personalize the high school experience for learners and respond to their challenges as they transition from middle school (Uvaas & McKevitt, 2013; Rivers, 2012). Unfortunately, it was not easy for schools to personalize the high school experience for each learner during the transition process because of the number of students involved (Ellerbrock et al., 2015; Rivers, 2012; Uvaas & McKevitt, 2013). Supporters of FAs put forth that they give teachers an opportunity to know and understand their students (Longobardi et al., 2016; Emmett & McGee, 2012). Also, the programs enabled educators to respond to the specific needs of students that can complicate the process of transitioning to high school. The

practice of dividing schools into small learning communities had given rise to the concept of FAs.

Finch et al. (2018) and Emmett and McGee (2012) stated that freshmen academies were usually autonomous programs that function within the context of a larger school. The theory behind the creation of these academies is that separating freshman from the rest of the school makes them comfortable and provides an opportunity for teachers to know new students better (Barnes & Eadens, 2014; Emmett & McGee, 2012; Finch et al., 2018; Osler & Walden, 2013). Students who belonged to the academies usually received extra social and academic support so that they can feel comfortable with the high school setting (Barnes & Eadens, 2014; Emmett & McGee, 2012; Finch et al., 2018; Osler & Walden, 2013).

For the freshmen academies to be effective, educators and administrators should be organized, caring, supportive and responsive to the specific needs of students (Emmett & McGee, 2012; Felmlee et al., 2018; Summerskill & Jones, 2013). Besides, teachers working with students in the FAs should strive to respond to the cultural experiences and needs of learners so that they can make the transition less challenging (Bloom & Uterman, 2013; Ellerbrock et al., 2015; Ellerbrock & Kiefer, 2010). Over the long term, the programs not only improve student engagement in the classroom and school activities but also prevent them from dropping out of school before high school graduation (Barnes & Eadens, 2014; Emmett & McGee, 2012; McKee & Caldarella, 2016; Osler & Walden, 2013; Summerskill & Jones, 2013).

The effectiveness and importance of FAs can be better understood by exploring and understanding the reasons why students, especially those from minority groups, drop out of school. There seemed to be a consensus among researchers that most students who drop out of high school feel that they do not have sufficient support from educators, peers, and parents (Barnes & Eadens, 2014; Emmett & McGee, 2012; McKee & Caldarella, 2016; Osler & Walden, 2013). Others drop out of school because they were not prepared to deal with the new and increasing demands that they face after moving from middle school to high school (Freeman & Simonsen, 2015).

The creation of FAs provided a valuable opportunity for teachers to collaborate with students and address the issues and factors that contribute to high school dropout. Also, the program provided learners the opportunity to understand and appreciate the new demands of high school as well as the learning styles and process (Ellerbrock et al., 2015; Emmett & McGee, 2012). With previous studies showing that children from minority groups are more likely to drop out of school, FAs provided a viable intervention that educators can use to improve school attendance and high school graduation rates among such groups (e.g., Barnes & Eadens, 2014; Benner et al., 2017; Emmett & McGee, 2012; Osler & Walden, 2013; Summerksill & Jones, 2013). Emmett and McGee (2012) noted that the programs create a setting where teachers can provide positive support and develop strong social relationships with new high school students. Furthermore, the academies ensure that African American students stay engaged in school even as they face the dramatic changes associated with the transition from middle school to high school

(George, 2016; Horwitz & Snipes, 2008; Riddle, 2013; Rivers, 2012; Uvaas & McKevitt, 2013).

Academic Outcomes

Helm (2018) investigated whether or not the implementation of a FA would increase 9th grade students' academic performance, reduce disciplinary referrals, and improve 9th grade promotion rates. Three research questions were used to determine the impact of the implementation of the academy: (a) How do the promotion rates and academic achievement vary between students from the class of 2015 who participated in a FA and the class of 2011, who did not participate in the FA? (b) How do graduation rates and dropout rates vary between students who participated in the FA and those who did not? and (c) How does the number of minor and major disciplinary referrals vary between students who participated in the FA and those who did not? In order to measure impact, *z*-tests were executed on thirteen variables.

As a result of the study, Helm made several recommendations. First, Helm recommended that educators should intentionally plan the implementation of the FAs over a six to twelve-month period and should involve at least one assistant principal, one school guidance counselor, one special educator, and a teacher from each core content area. Another recommendation is to develop a master schedule to support the FA. Helm also suggested that education plan FAs so that the transformation begins in 8th grade and consistently use progress monitoring to determine growth.

Smith (2018) conducted a mixed-methods study that analyzed if FA's could affect student outcomes. Participants included school officials at a high school in southeastern Virginia such as teachers, school counselors, and administrators. Merit, worth, and the impact of the academy were determined based on data collection. Quantitative data were collected using GPAs, attendance rate data, number of discipline referrals, Virginia Standards of Learning End of Course tests proficiency rates, and credits earned. Qualitative data were collected from interviews with teachers, school counselors, and administrators. The successes, challenges, and recommendations of the program were outlined in this study.

The analysis of student outcome data demonstrated that students in the program met the target outcomes for attendance, discipline, and the number of credits students needed to earn. Also, during the last year of the study, most of the students were passing their courses including Algebra I and World Geography. As a result of the study, Smith recommended future research and the expansion of the program that included a partnership between the FA teachers and administrators and eighth-grade teachers and administrators at feeder middle schools, implementing a summer bridge program for at-risk students, and increasing parental involvement and soliciting their feedback on the FA.

LoPresti (2017) explored how a FA influenced student connectivity, attendance, and academic achievement at a rural New Jersey high school. was conducted to provide formative data and evidence of the program's worth to stakeholders. Two questions guided the study: (a) What are the perceptions of the teachers, administrators, and

guidance counselors who participate in a freshmen transition program regarding student connectivity, attendance, and academic achievement? and (b) How do teachers and students participating in a FA demonstrate program influence in the areas of student connectivity, attendance, and academic achievement? Qualitative data was collected from program observations that included 22 teaching and professional staff, staff interviews, and a review of documented archival data and artifacts to evaluate the program's strengths and weaknesses, as well as its influence on student achievement.

After LoPresti analyzed the qualitative data, the results suggested that the academy positively influenced students' connectivity, attendance, and academic achievement are outlined. Those categories having the greatest influence in the academy included teacher/student and peer relationships; the organizational structure of teams and houses in the academy that provide more student individualized attention; common planning time for academy teachers; and a dedicated administrator and guidance counselor for greater, in-depth program support. LoPresti went on to claim that FAs were a potential expense that many school districts cannot afford, largely due to their separate and independent nature.

McMahan (2017) conducted a quantitative study in order to examine the relationship between student academic outcomes and the physical location in which 9th grade instruction was delivered. This study analyzed 9th grade academies and traditional four-year campuses to determine whether physical location of the 9th grade year had any impact on the student outcomes of attendance rates, percent of students who received

advanced placement (AP) credit based on AP exam success, type of graduation plan, percent of students at/above criterion SAT/ACT scores of 1110 on the SAT critical reading and mathematics sections combined, or 24 on the ACT composite, graduation rates by campus and graduates in Texas institutions of higher education completing one year without remediation. The study included schools from Texas, varying in size and demographics.

Using a repeated measures design, McMahan collected student achievement data from a cohort of students from both 9th grade centers and traditional 4-year high schools. McMahan provided an analysis between the two grade configurations when considering attendance, graduation rate, percent of students who received credit based on AP exam success, type of graduation plan, percent of students at/above criterion SAT/ACT scores of 1110 on the SAT critical reading and mathematics sections combined, or 24 on the ACT composite, and student performance in the first year of college. McMahan found that there was no relationship between the student outcomes of students who began on a 9th grade campus only and those who started high school at a 4-year traditional high school. McMahan wrote that additional research is needed to determine if outcomes are different at the end of the 9th grade year.

Steffen (2015) scrutinized data from a mixed method, two groups comparison study, which investigated a FA program developed, based on indicators for freshman success. The purpose of the study was to investigate whether the FA program increased student achievement and the percentage of on track for graduation students from 2014-

2015 compared to freshman from 2013-2014. Standardized test scores of 167 students in the FA program during the 2014-2015 school year and 151 students from the 2013-2014 school year provided quantitative data for this study in addition to perception surveys data collected from 16 staff members of the FA.

Five questions guided Steffen's study: (a) Did the student achievement of the students in the FA (2014- 2015) increase in math at a greater rate compared to like students from 2013- 2014?; (b) Did the student achievement of the students in the FA (2014- 2015) increase in reading at a greater rate compared to like students from 2013-2014?; (c) Did the percentage of on-track status increase for students placed in the FA program (2014-2015) compared to like students from 2013-2014?; (d) After participating in the 2014-2015 FA program, which specific components do the staff members involved in the program perceive were most beneficial to the students in the academy?; and (e) After participating in the 2014-2015 FA program, which specific components do the staff members believe should be continued, adjusted, or discontinued from the program.

Steffen offered several findings from the study. First, the Math MAP scores from the 2014-2015 sample did show an increase in the rate of growth in student achievement compared to students from the 2013-2014 sample. The Reading MAP scores from 2014-2015 sample did not show an increase in the rate of growth in student achievement compared to students from the 2013-2014 sample. The students in the FA from the 2014-2015 sample did achieve on-track status at a higher rate than the 2013-2014 sample. Some of the respondents commented that the counselor knows each of the students in the

academy individually and that the students know where to find her. The majority of the 16 surveyed staff members within the researched FA did not recommend the discontinuation of any of the components.

Evidence from Steffen's study suggested that participation in a FA can improve the probability that a student would have been promoted from 9th to tenth grade on-time. No other significant differences were found when looking at the dropout rate, graduation rate, and grade point averages at the end of the 9th grade year. When controlling for 8th grade Reading CRCT and 8th grade English/Language Arts CRCT scores, there was no significant difference in 9th grade Literature/Composition End of Course Test (EOCT) scores between the two groups.

Seng (2014) conducted a causal-comparative (ex-post facto) correlation study to compare the academic outcomes of 9th grade high school students between two groups, those who attended a FA and those who did not attend a FA, when controlling for ethnicity, 8th grade Reading CRCT scores, and English/Language Arts CRCT scores among 9th grade students at two comprehensive high schools in suburban Atlanta, Georgia. The treatment group, the freshman class implementing the FA model, was compared to the control group, a traditional high school freshman class with no FA.

Seven research questions guided the study: (a) Is there a statistically significant difference in the odds of dropping out of 9th grade between 9th grade students who attended a FA as compared to similar 9th grade students who did not participate; (b) Is there a difference in the odds of being promoted to the tenth grade between 9th grade

students who attended a FA as compared to similar 9th grade students who did not participate by race?; (c) Is there a statistically significant difference in the odds of graduating in four years between 9th grade students who attended a FA as compared to similar 9th grade students who did not participate by race?; (d) Is there a statistically significant difference in the average grade point average between 9th grade students who attended a FA as compared to similar 9th grade students who did not participate?; (e) Is there a statistically significant difference between the Literature EOC test scores between 9th grade students who attended a FA as compared to similar 9th grade students who did not participate in the FA model?; (f) Is there a statistically significant difference between the Literature EOC test scores between 9th grade students who attended a FA as compared to similar 9th grade students who did not participate by race?; and (g) When controlling race and 8th grade English/Language Arts CRCT scores, is there a statistically significant difference in the average 9th grade Literature EOC test scores between 9th grade students who attended a FA as compared to similar 9th grade students who did not participate?

Seng reported several results from the study. One result was that there was no significant reduction in the dropout rate by students who participated in the FA when controlling for ethnicity. The results also indicated that was a significant difference in the percentage of students being promoted who participated in the FA than those who did not participate in the FA. There was no significant difference in the percentage of students that graduate between students that attend a FA and students that do not attend a FA. There was no significant improvement in the average GPA among the students who participated

in the FA when compared to students who did not participate in the FA and there was not a significant difference in the 9th grade Literature/Composition End of Test (EOCT) scores of 9th grade students attending the FA as compared to a similar 9th grade class that did not participate in the FA.

Additionally, the results of the study showed that there was not a significant difference in the 9th grade Literature/Composition EOCT scores of 9th grade students attending the FA as compared to a similar 9th grade class who did not participate in the FA. As a result of the study, Seng suggested that future researchers conduct studies that consider if a FA helps to increase academic performance for the remainder of the high school years, if the dropout rate in years after participation in a FA would be appropriate, and that help clarify the role the FA might have in future decisions by students to remain in school or dropout.

Kerns (2014) conducted a mixed method approach to compare the English EOC (EOC) test scores, the promotion rates, and the retention rates of students who participated in a FA to those of students who did not participate in the academy. The study included 9th grade students from two high schools who were freshman during school years from 2008 through 2012. The Literature EOC scores of 527 students and results from a survey that was completed by 28 teachers served as the quantitative data. Information from interviews from two principals, four assistant principals, and five guidance counselors served as the qualitative data.

In order to analyze the data, Kerns used descriptive statistics, a *t*-test, and a chi-square test. All tests were performed at .05 level of significance. Results from the student indicated FAs are critical to the transition of 9th graders. Findings also indicated that FAs are significant for setting academic expectations, curricular interventions, social structures and students' relationships faculty and staff. However, results of the study did not indicate that students who attend a FA their 9th grade year had higher academic performance than students attending a traditional high school did. There were no differences in the retention rates, promotion rates graduation rates between the two groups of students. As a result of the study, Kerns recommended that the study be replicated with a larger sample size. Kerns also recommended that future studies and in addition to a comparison of literature scores, should include scores from the English, Algebra 1, and Biology EOC tests.

Luna (2017) conducted a causal-comparative research study to investigate whether or not a FA impacted students' scores on State of Texas Assessment of Academic Readiness (STAAR) Biology, Algebra I, and English I EOC tests. Luna compared the scores for 509 students who attended a high school located in West Texas during the 2012-2013 and 2013-2014 school years before and after the implementation of the 9th grade academy. There were 279 9th grade students at the high school in 2012- 2013 class and 230 9th grade students in 2013-2014.

Three questions guided the quantitative research study: (a) Is there a statistically significant difference in standardized test scores exists before and after the implementation of the 9th grade academy, as measured by students' performance on the 9th grade EOC

STAAR test in Biology?; (b) Is there a statistically significant difference in standardized test scores exists before and after the implementation of the 9th grade academy, as measured by students' performance on the 9th grade EOC STAAR test in Algebra I?; and (c) Is there statistically significant difference in standardized test scores exists before and after the implementation of the 9th grade academy, as measured by students' performance on the 9th grade EOC STAAR test in English I? Findings from the student indicated no statistically significant difference between Even the Algebra I, Biology, and English scores before and after the implementation of the 9th grade academy.

The dependent variables for the study were dropout status, promotion status, grade point average and the Literature EOC test scores. Findings from Luna's study indicated that a FA could improve promotion. However, there was no evidence that a FA can decrease dropout, increase the percentage of students that graduate, increase the 9th grade grade point average, or increase the 9th grade Literature EOC scores.

Participation status in the FA was the independent variable and the data collected for each cohort were the dependent variables. The dependent variables were the percentage of students retained in 9th grade, percentage of students passing EOCTs in English, math, and science in 9th grade, and the percentage of students in the cohort who graduate four years after entering high school. Data were analyzed using a chi square test and MANOVA. The results of the study indicated that no significant statistical differences existed regarding the implementation of a FA and student achievement. Findings indicated no significant differences between 9th grade retention and standardized test scores and the

implementation of a FA, with 9th graders in both cohorts displaying equal performances. Quantitative analysis indicated no major difference in the passing rate on the EOC test or the graduation rates. Student achievement for both cohorts was almost identical.

Buie (2015) conducted a study in order to investigate the impact of a FA on the academic achievement in mathematics and literacy of high school students in Arkansas. There were 151 students who did not participate in the academy, and 275 participants who did participate in the academy. Of the participants, 51% were female and 49% were male, and 57% of students were designated low socioeconomic status. The 9th grade class of School B consisted of 275 students; 190 of those 9th graders were study participants. Of the participants, 58% were female and 42% were male, and 39% of the students were designated low socioeconomic status. The outcomes were for student achievement were investigated by gender and socioeconomic status. Findings from the study indicated no significant difference by gender or by socioeconomic status in the mathematics or literacy achievement between participants in a FA versus those who did not participate in the academy.

Discipline

Martin (2018) conducted a causal-comparative study in order to determine if 9th grade academies impacted grade-level the retention rate and discipline referrals made to administrators about 9th grade students. Two research questions guided the study: (a) Is there a significant statistical difference in the retention rate of 9th grade students based on whether they enrolled or participated in the 9th grade academy or if they were enrolled in

traditional 9th grade classes?; and (b) Is there a significant statistical difference in the number of Group A and Group B office discipline referrals from teachers to administration for 9th grade students, whether they enrolled or participated in the 9th grade academy or if they were enrolled in traditional 9th grade classes?

Secondary data for the study was gathered from the counselors and administrators from four participating high schools. The data was collected from four schools, which had a predominantly African-American population of more than 90 percent. More than half of the population in all of the schools receives free or reduced lunch, which designates the schools as low-income schools. An analysis of the data was done using an independent samples *t*-test. The outcome of the study did not suggest the need for transition and indicated no significant statistical difference between the retention rates and in and the discipline referrals of students who participated in a 9th grade academy and those who did not participate.

Snipes (2015) conducted a quantitative study to investigate the impact a FA on the academic and behavioral performance of students in the tenth grade. In order to measure the effects of the FA on tenth grade performance in academics, discipline, and attendance data from two schools was statistically compared. The independent variable was the absence or presence of the 9th Grade Academy Program. The dependent variables were attendance, suspension rates, and grade point average. A *t*-test of independent samples was used in the analysis of attendance, and GPA data. A chi-square test was applied in the analysis of the suspension data. At the alpha level of .05, the findings revealed that there

was no significant difference between the attendance and GPA of the two groups of students. A significant difference was found between the suspension rates of the two groups in favor of students who participated in the 9th Grade Academy Program.

Wilcox (2018) conducted a quantitative research study to determine if freshman transition programs help students, specifically those at risk, succeed in achieving higher test scores, higher attendance rates, and lower major discipline incidents throughout their high school career. Wilcox investigated all 152 public Missouri high schools to determine if different outcomes occur in academic test scores, attendance rates, and major discipline incidents between high schools integrating freshman transition programs into their curriculum and those without freshman transition programs. Two research questions guided the study: (a) Did attendance increase attendance, and were disciple incidents reduced after implementing a freshman transition program? and (b) Did a freshman transition program improve the academic success of students, increase attendance, and reduce major discipline incidents by the percentage of students considered at risk because they are eligible for free and/or reduced priced lunches?

In this study's data analysis, tables and summaries described student data for End of Course testing for English II, End of Course testing for Algebra I, Yearly Attendance Rate, and number of Major Discipline Incidents. A MANOVA was conducted to indicate significance between variables. The overall interaction between freshman transition programs and free and/or reduced lunch percentages were also noted using Wilks' Lambda. Factorial MANOVA analysis of variance was performed to test for a statistical

significance in the areas of English II EOC and Algebra I EOC scores, yearly attendance rates, and student disciple incidents between high schools offering freshman transition program aspects and those not.

Results of the study also indicated that freshman transition programs in place may have affected student achievement scores in the areas of Algebra I and English II for the school years 2014-2015 and 2015-2016 but may not have affected attendance rates or reduction in major discipline incidents. Mean assessment scores were higher for schools having freshman transition programs in place. Attendance rates were lower while major discipline incidents were higher for schools offering freshman transition programs. However, many of these results were not statistically significant.

Implications

The review of literature revealed that the transition from middle school to high school could be problematic for students when they do not have the support of all stakeholders, which can potentially lead to these students dropping out of school. Some studies about FAs resulted in mixed or inconclusive findings. On one hand there are studies that support the use of FAs for improving outcomes and other studies that have resulted in no differences. This chapter addressed the transition from middle school to high school, attendance, behavioral, and academic outcomes of 9th grade students who attend high schools in the United States. Because large groups of high school students struggle to transition from middle school to high school, they needed support from all stakeholders.

Summary and Conclusions

Transitioning from middle school to high school can be a challenge for many students. Changes in the levels of supports, academic demands, learning environment, and school setting have the potential to cause students who are underprepared and lack the necessary skills to struggle. Schools that provide support systems such as FAs assist students who would otherwise struggle meet with success and lessen the chances that they would leave school early. The stage-environment fit theory supports this notion by asserting that by developing a learning environment supports the developmental, social, and emotional needs of the learners will supports their efforts to remain resilient and achieve academic success (Eccles & Midgley, 1993).

Chapter 2 presented the literature pertinent to the middle school to high school transition. First, Chapter 2 presented an introduction, which included the strategy for conducting the literature review. Next, this section presented a synthesis of the literature, which focuses on the middle school to high school transition for students in the United States. Included in the analysis the literature supporting 9th grade academies. Next, the literature on the impact of FAs on students' outcomes was presented. Chapter 2 ended with the implications of the literature review and a summary.

Chapter 3 covers the following topics: the methodology and the research design, information about the population and sample for the study, the method for collecting and analyzing the data.

Chapter 3: Research Method

Introduction

Teachers and administrators have a responsibility to make sure that all K-12 students are successful in school. However, data reported by the Georgia Department of education indicated that significant numbers and percentages of 9th grade students who attended a high school in Georgia did not attend class regularly, were referred to the office for discipline problems, and were not proficient in 9th Grade Literature and Composition or in Algebra I. The transition from middle school to high school is one of the most difficult experiences that students faced (Ellenbrock et al., 2015; Flennaugh, 2017; Grills-Taquechel et al., 2013; Royal et al., 2014). Students' transition can negatively affect their relationships with their parents, their classmates, their teachers, and, ultimately, their academic achievement (Longobardi et al., 2016; MacIver et al., 2015; Pandina et al., 2015).

Researchers asserted that FAs could improve students' trajectory from middle school to high school so that they are more resilient (see, for example, Barnes & Eadens, 2014; Guillaume. 2013; Longobardi et al., 2016; Mac Iver et al, 2015; Osler & Walden, 2013). To date, there have been no published research studies that focused exclusively on the possible effects of attending an FA on the attendance, the behavior, the 9th Grade Literature and Composition EOC test scores and the Algebra I EOC test scores of 9th grade students in a rural school district in Georgia.

The purpose of this study was to examine whether a FA impacted the attendance, behavior, the Literature and Composition EOC test scores and the Algebra I EOC test scores of 9th grade students in comparison to 9th grade students who did not participate in a FA in a rural school district. Eccles and Midgely's (1993) stage-environment fit theory served as the theoretical framework. The following research questions guided the study, and the following hypotheses were tested:

RQ1: Does the attendance in Freshman academy decrease absences in attendance?

$H1_0$: There is no statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H1_a$: There is a statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ2: Does the attendance in a Freshman academy decrease discipline incidences?

$H2_0$: There is no statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during the 2016-2017 and the 2017-2018 academic

years and 9th grade students who did not participate in a FA during those same years.

$H2_a$: There is a statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ3: Does the attendance in a FA positive affect Literature and Composition scores?

$H3_0$: There is no statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H3_a$: There is a statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ4: Does the attendance in a FA positive affect math scores?

$H4_0$: There is no statistically significant difference between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade

students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H4_a$: There is a statistically significant difference between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

This chapter includes the research design, methodology, a description of the population and the sample for the study, and the method that was used to collect and analyze the data.

Research Design and Rationale

This section will discuss the available methodologies and design considerations for this proposal and present which one is most applicable and the best choice for investigating the research questions of whether the attendance in the FA had any significant effects on attendance, academic success, or correlations to disciplinary issues.

Methodological Considerations

A quantitative research methodology was used to conduct this causal-comparative (ex post facto) study. A quantitative research methodology for this study is more appropriate than a qualitative design for several reasons. First, a qualitative research approach is used when the researcher wishes to investigate underlying reasons or a

phenomenon through interviews or focus groups (Lewis, 2015; Ormston et al., 2014). A qualitative research approach is also used when the researcher wishes to explore the perceptions, perspectives, and opinions of subjects or participants (Fusch & Ness, 2015; Lewis, 2015).

On the other hand, quantitative research approaches are used to analyze a problem through numerical data. A quantitative research approach is also used when the researchers wish to identify, quantify, and compare variables and test hypotheses (Clearly et al., 2014). Also, while qualitative approaches use an inductive approach, quantitative studies use a deductive approach and are outcome oriented rather than process-oriented (Ormston et al., 2014). Qualitative methods are also used to investigate problems from a bottom-up or exploratory approach whereby the researcher formulates new theories and hypothesis from data (Precy et al., 2015).

Quantitative methods use a top-down or confirmatory approach whereby the researcher tests hypothesis based on the analysis of numerical data (Nelson, 2017). Unlike a qualitative approach, which seeks to collect narrative data through interviews, a quantitative methodology allowed me to collect and inferentially analyze numerical data associated with attendance, behavior, and the Literature and Composition EOC test scores and the Algebra I EOC test scores. Thus, for these reasons, a quantitative design is the best fit for this proposal.

Research Design Considerations

Other research design methods were considered, but these methods were not appropriate for different reasons. A qualitative approach was considered, but not selected because the approach collects narrative data through interviews and an inductive approach (Precy et al., 2015). When using a qualitative approach, I would have been able to explore the perceptions, perspectives, and opinions of study participants (Fusch & Ness, 2015). This approach does not allow the opportunity to quantify and analyze numerical data associated with attendance, behavior, and academic achievement.

A mixed method approach was also considered, but not selected because the approach combines the use of open-ended and close-ended data. By using both data sets, I would have been able to use predetermined and emerging methods as well as open and closed ended questions (Schoonenboom, 2017). Although this approach would have allowed me to quantify and analyze numerical data, I was not seeking to understand perceptions and perspectives for the study.

The current study used a causal-comparative (ex post facto) research design, which is considered "explanatory" and retrospective in nature in that it seeks to describe the extent and nature of functional relationships between variables or events that have already occurred (Brewer & Kuhn, 2010). The causal-comparative research design is appropriate for this study because the independent variable was not manipulated and there was not any random assignment of students to groups (Brewer & Kuhn, 2010). Additionally, a causal-comparative research design was appropriate because it allowed me to investigate whether

any changes/improvements in the dependent variables may be attributed to the past/prior implementation of the FA (i.e., the IV) at the high school in 2018 (Brewer & Kuhn, 2010). I compared the groups by collecting archived data analyzing it to see if something did, indeed, "happen," which if significant might suggest or give rationale for designing a quasi-experimental arrangement to directly manipulate the independent variable. Because this design is non-experimental, the data that was collected was analyzed without manipulation as the data cannot be ethically manipulated.

This study used a causal-comparative (ex post facto) design, which allowed me to answer the research questions using quantitative data. A causal-comparative research design specifically allowed me to compare the attendance rate of 9th grade students who participated in a FA during the 2017 and 2018 academic year to 9th grade students who did not participate in a FA during the same year. A causal-comparative research design specifically allowed me to collect quantitative data in order to determine if a statistically significant difference exists between the number of discipline referrals for 9th grade students who participated in a FA during the 2017-2018 academic year and the number between the number of discipline referrals for 9th grade students who did not participate in a FA during the same year.

By using a causal-comparative (ex post facto) research design, I collected quantitative data in order to determine if there is a statistically significant difference between the Literature and Composition EOC test scores for 9th grade students who participated in a FA during the 2017-2018 academic year and the Literature and

Composition EOC test scores for 9th grade students who did not participate in a FA during the same year. Finally, a causal-comparative research design allowed me to test the hypotheses presented in this study thereby answering my four research questions.

Brewer and Kuhn (2010) contended that there are limitations to using a causal-comparative research design. Because the independent variable or event to be studied has already occurred in the past, there is no way to control variables and the variables cannot be directly manipulated. Additionally, there is no way to determine if other variables besides the independent variable impacted the dependent variables. Because no random sampling occurred and no random assignment to treatment and control groups was involved, the results of the study cannot be generalized to other populations but is limited to the study population recruited in this study.

Methodology

A quantitative causal-comparative (ex post facto) design approach was used for the study. By using this approach, I was able to examine the FAs' impact on 9th graders' attendance, behavior, and EOC test scores in the areas of Literature and Composition and Algebra I in comparison to a control-group school that did not implement the 9th grade FA. To analyze this information, all first-time freshmen during the 2017-2018 school year participated in the study.

Population

The NCES (2018) provides information on school districts and schools across the country. According to the NCES, at the intervention school, 80 teachers serve

approximately 1,395 students in grades nine through 12. There are 528 students enrolled in the 9th grade, 338 students in the tenth grade, 281 students in the 11th grade, and 248 students in the twelfth grade. There are 676 males (48.46%) and 719 females (51.54%) who attend the school. There are 788 or 56.49% are African American. White students make up 466 or 33.40% of the student body at the high school. There are 91 or 6.52% of the students who are Hispanic. Students of two or more races represent 35 or 2.50 % of the student body. Asian students make up 13 or .93% of the student populace and American Indian students make up two or .14%. The school is a Title I school as 912 or 65.37% of the 1, 395 students are eligible to receive free meals and 115 or 8.24% receive reduced-price meals. All of the 9th grade students at the intervention school participated in the FA.

The 9th grade students who attended nonintervention school did not participate in a FA. According to the NCES (2018), at the nonintervention school, 79 teachers served approximately 1,294 students in grades nine through 12. There were 482 students enrolled in the 9th grade, 299 students in the tenth grade, 260 students in the eleventh grade, and 221 students in the twelfth grade. There were 687 males (54.43%) and 575 females (45.56%) who attend the school. There were 417 or 33.04% are African American. White students made up 741 or 58.71% of the student body at the high school. There were 58 or 4.59% of the students who are Hispanic. Students of two or more races represent 33 or 2.61 % of the student body. Asian students made up 11 or .87% of the student populace and American Indian students made up two or .15%. The school is a Title I school as 636

or 50.39% of the 1, 294 students were eligible to receive free meals and 99 or 7.84% received reduced- price meals.

The target population for this study came from two high schools located in the same rural school district located in the west central region of Georgia. Throughout the study, the high schools were referred to as the intervention school and nonintervention school. The populations of both schools are similar as there is a small Hispanic and Asian population. The schools are different as the intervention school had approximately 1400 students while the nonintervention school had approximately 1300 students. Also, in the intervention school, teachers in the FA teach only freshman while teachers at the nonintervention school teach students in all grade levels. Also shown in Table 1 and Table 2, there are more instances of absenteeism in the nonintervention school in comparison to the intervention school, but in the intervention school there are more discipline incidents.

Sampling and Sampling Procedures

The target sample was selected from the target population of students who were in the 9th grade and who attended the intervention school and nonintervention school in the district during the 2017-2018 school year. The sample was selected through purposive sampling. The data was collected from the district and archived data from the Governor's Office of Student Achievement. Data was sent to me by the district's data clerk and accessed through the Governor's Office of Student Achievement public domain website. Personally, identifiable information from archived data was redacted by the district's data clerk before being given to me. Purposive sampling is used when the researcher relies on

his or her own judgment when choosing members of population to participate in the study (Etikan et al., 2016). Purposive sampling is also appropriate when there is a limited number of primary data sources who can contribute to the study (Etikan et al., 2016). Purposive sampling was used in this study because there was only one high school in the district, the intervention school, which has implemented a FA (Etikan et al., 2016). Purposive sampling was used because the demographics for the students who attended the nonintervention were the most like the demographics for students who attend the intervention school. The sample for the intervention school consisted of all students who are in the 9th grade during the 2017-2018 school year. All 9th grade students at the intervention school participated in the FA. The sample for the nonintervention school consisted of all students who are in the 9th grade during the 2017-2018 school year. None of the 9th grade students from the nonintervention school participated in a FA.

Based on the G*power results, a minimum sample of 76 total was needed for this study and, specifically, to conduct a MANOVA for the data analysis portion. This was an *a priori* G*power test to assist with the research design and methodology (Faul et al., 2014). G*power assists researchers by informing them what sample size is needed to detect some level of effect. For this research study and G*power, the effect size is .25, which is a small to medium effect size. To run a MANOVA for the current study, a sample size of 76 was needed for three or four groups, which equated to approximately 20 students from each school from each year. It was anticipated that the data for 95 students would be available, which would provide a higher sample than suggested by the G*power

and providing better ability to detect the difference statistically; otherwise, the effect could have been concealed by the randomness in the smaller samples.

Intervention Condition

The FA was implemented during the 2010-2011 school year. The FA focused on promotion to help students who were at risk of not being successful during 9th grade receive the support needed to be successful. The FA was designed specifically for first-time freshman and included an administrator, counselor, and teachers that served solely the FA offering students a personalized learning environment that support their individual needs. In addition, the FA was housed on a specific hall that was designated for first time freshmen only. Within the academy, students received instruction in the four core content areas. Additionally, because the school used the block schedule, students received instruction within class periods that are 90 minutes.

Emmett and McGee (2012) assert that FAs are small, structured learning communities within high schools that offer academic, social, and emotional support to 9th grade students who have deficiencies that inhibit their school performance. Additionally, FAs are also usually autonomous programs that function within the context of a larger school (Emmett & McGee, 2012).

"Business as Usual" Condition

Students transitioning from middle school to the traditional high school transitioned from feeder middle schools within the county. The traditional high school is focused on core content subjects and is teacher centered. Students were required to take

9th grade core classes, which were taught by different teachers throughout the school. These courses often included students from other grades who have not successfully completed the course. Administrators and counselors were each assigned specific letters of the alphabet and served students based on students' last names to ensure that there was equal distribution of students.

Archival Data

The data that was used to conduct this study includes the attendance rates, the discipline referrals, and Literature and Composition and the Algebra I EOC Test Scores for the 9th grade students who attended School A and who participated in the FA and the 9th grade students who attended School B and who did not participate in the FA and during the 2017-2018 school year. The archived data was accessed through the district and the Governor's Office of Student Achievement.

Instrumentation and Operationalization of Constructs

In every true research experiment, there are two key variables: the independent variable and the dependent variable (Bulmer, 2017). The independent variable is the variable whose change is not affected by any other variable in the experiment (Bulmer, 2017). The dependent variable is what is being studied and measured in the experiment (Bulmer, 2017). The four independent variables for this study were the 9th grade students': (a) attendance rates (continuous/interval type of data); (b) number of discipline referrals (continuous/interval type of data); (c) Literature and Composition EOC test scores (continuous/interval type of data); and (d) the Algebra I EOC test scores

(continuous/interval type of data). The 9th grade students' participation in the FA at the intervention school served as the dependent variable.

Data Analysis Plan

The data was gathered in order to answer the research questions that guided the study. The data was analyzed using SPSS 25 via a Mac OS High Sierra to conduct a MANOVA in order to determine if the FAs impacted the attendance rate, the discipline referrals, Literature and Composition and the Algebra I EOC Test Scores between the 9th grade students who attended the intervention school and who participated in the FA during the 2017-2018 school year to the attendance rate, the discipline referrals, Literature and Composition and the Algebra I EOC aggregated test scores between the 9th grade students who attended the nonintervention school and who did not participate in the FA during the 2017-2018 school year.

To prepare the data for analysis, I reviewed the data, checking for accuracy and any missing data. This system allowed me to group data based on the research questions. To control for the presence of possible outliers, the recommended margin for error was set at $p \leq .05$ and all statistical assumptions for homogeneity of variances, standard normalization, multicollinearity were tested. Descriptive data including individual EOC data, individual attendance data, and individual discipline data were analyzed and presented to show the impact of the intervention (i.e., FA) versus the nonintervention.

Four independent variables were measured during the study: (a) attendance rates; (b) number of discipline referrals; (c) Literature and Composition EOC test scores; and (d)

the Algebra I EOC test scores. The school served as the dependent variable. For the first research question: *Does the attendance participation in FA decrease absences in attendance?* the aggregated attendance rates for the 9th grade students from the intervention school (n1) and the attendance rates for 9th grade students who attended the nonintervention school (n2) was uploaded into SPSS. Afterwards, the mean attendance rates was analyzed using two-way MANOVA. The *p*-value was set at .05. A *p*-value less than .05 indicated a statistically significant difference exists between the two means. A *p*-value lower than .05 indicated that no statistically significant difference exists between the two means. If a statistically significant difference between the mean scores exists, a Cohen's *d* effect size was calculated. According to Gignac and Szodorai (2016), an effect size of .8 or greater indicates a large effect. A size less than .8 indicates a small effect.

For the second research question: *Does the attendance in an FA decrease discipline incidences?* the number of discipline referrals for the 9th grade students from intervention school (n1) and the number of discipline referrals for 9th grade students who attended the nonintervention school (n2) was uploaded into SPSS. Afterwards, the mean number of discipline referrals for 9th grade students who attend School A and 9th grade students who attend School B was analyzed using MANOVA. The *p*-value was set at .05. If there is a statistically significant difference in the two means, a Cohen's *d* effect size was calculated.

For the third research question: *Does the attendance in a FA positive affect Literature and Composition assessment scores?,* the number of discipline referrals for the

9th grade students from the intervention school and the number of discipline referrals for 9th grade students who attended the nonintervention school was uploaded into SPSS. Afterwards, the mean number of discipline referrals for 9th grade students who attended the intervention school and 9th grade students who attended the nonintervention school were analyzed using a MANOVA. The *p*-value was set at .05. If there is a statistically significant difference in the two means a Cohen's *d* effect size was calculated.

For the fourth research question: *Does the attendance in a FA positive affect math scores?,* the number of discipline referrals for the 9th grade students from the intervention school and the *Algebra I EOC test scores* for 9th grade students who attended the nonintervention school was uploaded into SPSS. Afterwards, the mean *Algebra I EOC test scores* for 9th grade students who attended the intervention and 9th grade students who attended the nonintervention school were analyzed using a MANOVA. The *p*-value was set at .05. If there is a statistically significant difference in the two means a Cohen's *d* effect size was calculated. The data was also used to determine if the null hypotheses and the alternative hypotheses should be accepted or rejected.

Before the statistical analysis of the data took place, I conducted a prescreening of the data to ensure that the data does not violate the statistical assumptions. The data did not violate the assumptions for MANOVA. When I obtained statistically significant results, I ran Tukey's HSD post-hoc test and report the effect size and discuss the practical significance of the findings in Chapter 5.

Ethical Procedures

To ensure that the current study met all ethical guidelines and procedures, I sought permission and gained approval to conduct the study from the superintendent of the school district represented in the study. I then sought permission and gained approval from Walden University's IRB office in order to carry out the study. Additionally, no personal information was used in the study that allow readers to link the attendance and discipline rates and EOC scores to any individual. All data that was collected is currently public knowledge presented on the Georgia Governor's Office of Student Achievement. All data was kept under lock and key at my home and was also stored in a password protected laptop, in which the file was also password protected. I was the only one with access to the data, which will be destroyed 5 years after the current study is complete.

Summary

Chapter 3 presented information about the research methodology and the design that was used to answer the research questions for the study. The settings for this study were two high schools located in the same rural school district located in Georgia. The demographics of the schools were discussed in this section. This study used a quantitative methodology and a causal-comparative (ex post facto) design to collect data relating to the attendance, behavior, and the Literature and Composition EOC test scores and the Algebra I EOC test scores of 9th grade students who attended high schools located in one rural school district in Georgia.

The sample was selected from the population of students who were in the 9th grade and who attend school in the district during the 2017-2018 school year. The sample was selected through purposive sampling. The sample for the intervention school consisted of all students who were in the 9th grade during the 2017-2018 school year and who participated in the FA. The sample for the nonintervention school consisted of all students who were in the 9th grade during the 2017-2018 school year and who did not participate in a FA. Four independent variables were measured during the study: (a) attendance rates; (b) number of discipline referrals; (c) Literature and Composition EOC test scores; and (d) the Algebra I EOC test scores. The FA at the intervention school served as the dependent variable. The data was analyzed using a two-way MANOVA. If there was a statistically significant difference in the two means a Cohen's *d* effect size was calculated and reported.

Chapter 4 will present an analysis of the data. Within this chapter, the school district demographics are provided along with the descriptive demographics of the study sample. Additionally, the results of the assumptions testing for the two-way MANOVA were also presented. Also, the results of the statistical analysis, the two-way MANOVA, were presented for each research question, stating the statistical significance of each result as well as the effect sizes. Lastly, post-hoc Tukey's HSD test, a single-step comparison method, was conducted to find means that were significantly different from one another.

Chapter 4: Results

Transitioning from middle school to high school is often challenging for many students due to adolescent biological factors, which impact their psychological and social behavior (Grills-Taquechel et al., 2014; Schaffhuser et al., 2017; Yeager et al., 2016). Inadequate preparation for students' transition from middle school to high school can lead to decreased academic achievement, absenteeism, and discipline issues (Saddler, 2019). Data reported by the Georgia Department of Education (2018) indicated that significant percentages of 9th grade students in the state were not proficient in English/Literature and in Algebra I. Many students in Georgia also had issues with attendance and behavior. Teachers and administrators were responsible for supporting all students, including those who are transitioning from middle school to high school (Longobardi et al., 2016; Mac Iver et al., 2015). Some researchers see FAs as a possible method for providing extra academic and social support through personalized and engaging learning environments (see, for example, Biag, 2014; Clark et al., 2016; Ellerbrock, et al., 2015). However, empirical evidence from three? research studies on FAs have resulted in mixed or inconclusive findings (Chmelynski, 2004; Irvin, 2014; Seng, 2014).

The FA at the school of focus provided academic, behavioral, and social support to students to help them matriculate through their freshman year of high school. Information about attendance, discipline, and academic achievement was provided through freshman class meetings held during the first week of school and individual class discussions by each classroom teacher. During both the group and class meetings, administrators,

teachers, and the freshman counselor discussed how school absenteeism and also disciplinary action, such as referrals, could limit academic success and cause students to miss opportunities to receive academic support through tutoring. School officials reiterated how decreased school attendance could cause students to disconnect from school, leading them to drop out. This study focused on attendance, behavioral, and academic achievement results of students participating in the FA.

This study used a causal-comparative design to answer the following research questions and to test the following hypotheses:

The following research questions guided the study, and the following hypotheses were tested:

RQ1: Does the attendance in Freshman academy decrease absences in attendance?

$H1_0$: There is no statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H1_a$: There is a statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ2: Does the attendance in a Freshman academy decrease discipline incidences?

$H2_0$: There is no statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H2_a$: There is a statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

RQ3: Does the attendance in a FA positive affect Literature and Composition scores?

$H3_0$: There is no statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H3_a$: There is a statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade

students who did not participate in a FA during those same years.

RQ4: Does the attendance in a FA positive affect math scores?

$H4_0$: There is no statistically significant difference between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

$H4_a$: There is a statistically significant difference between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

Chapter 4 presents the results of this study, beginning with a description of the setting, demographics, and participant selection process. A discussion of the data collection process follows. Presentation of the data analysis process includes a description of the data analysis process. Finally, each of the research questions were answered according to the findings.

Data Collection

Population

The setting for this study was a large suburban school district in Georgia. According to data collected from the NCES (2018) database, the district served 10,960

pre-K through 12th grade students and included 11 elementary schools, four middle schools, five high schools and two learning centers. There were 910 students (8.31%) in the district who attended nursery school or pre-kindergarten, and 1,020 (9.31%) attend kindergarten. There were 6,395 (58.34%) students who attended elementary school (Grades 1-8) and 2,635 (24.04%) students who attended high school (Grades 9-12). Of the students who attended school in the district, 5,810 (53.02%) were male and 5,150 (46.98%) are female.

Of the total district K-12 student population, African American students comprised 43.65% (*n* = 4,785) of the total sample. White K-12 students comprised 50.36% (*n* = 5,520). Asian/Pacific K-12 students comprised 1.32% (*n* = 145). Hispanic students comprised 8.3% (*n* = 910) of the total sample. American Indian/Alaska Native K-12 students comprised only 0.41% (*n* = 5). K-12 students from two or more races comprised 3.19% (*n* = 350) and K-12 students from other races comprise 1.09% (*n* = 120).

The students in the school district represented 32 countries and 21 different languages. There were about 300 English Language Learner students and just over 1,200 students receive special education services. About 77.7% (*n* = 8,516) of the K-12 students are from families whose income was below the poverty level as determined by their eligibility to receive either free or reduced-price meals at school. The district employed a total of 1,483 faculty and staff. The majority of the employees were teachers (*n* = 683). There were 27 prekindergarten teachers and 41 kindergarten teachers. There were also 246 elementary teachers, 278 secondary teachers, and 91 general education

teachers who teach in ungraded classrooms across all grade levels. Table 3 below displays the numbers and percentages of the students in the district by grade-level, gender, and race.

Table 3

School District Student Demographics

Demographic	Enrollment	Percent
Grade Level		
Nursery School/pre-K	910	8.31%
Kindergarten	1,020	9.31%
Elementary	6,395	58.34%
High School	2,635	24.04%
Gender		
Male	5,810	53.02%
Female	5,150	46.98%
Race		
African American	4,785	43.65%
American Indian	5	.41%
Asian	145	1.32%
Hispanic	910	8.30%
White	5,520	50.36%
Two or More Races	350	3.19%
N	10,960	100.0%

Note: Source is from the National Center for Education Statistics (NCES) Common Core of Data database for individual schools and school districts for the 2017-2018 school year. The data listed represent the racial, gender, and grade level composition of the school district.

Sampling Procedures

The data collected during this study represented a total of 1,526 9th grade students, 842 from the intervention school and 684 from the nonintervention school. The data was archival data and is housed in the school district's central office. I was given access to the data by the district's data clerk. The sampling procedure that was used was a form of purposive sampling in which the entire freshman population was included in the study because the entire freshman population met the study's inclusion criteria at each school and in each year studied (Banerjee & Chaudhury, 2010). The archived data from the intervention school were representative of 431 9th grade students, who participated in the FA during the 2016-2017 academic year and 411 9th grade students who participated in the FA during the 2017-2018 academic year. The data of 368 9th grade students from the nonintervention school are represented in this study for the 2016-2017 academic year and the scores of 316 9th grade students from the same school are represented for the 2017-2018 academic year. Table 4 displays the number of participants represented in the study who attended the intervention and nonintervention schools from 2016 from 2018 along with students' gender.

As shown in Table 4, there was a total of 1,526 9th grade students from whom data were collected in the archived records system. For the 2016-2017 school year, there were 431 (53.94%) students in the intervention school category and 368 (46.06%) students in the nonintervention school category. The total students represented in the 9th grade 2016-2107 school year was 799. In the intervention school category, 393

(49.19%) students were male, and 406 (50.81%) students were female. The total students represented in the 9th grade 2017-2018 school year was 727. For the 2017-2018 school year, there were 411 (56.53%) students in the intervention school category and 316 (43.47%) in the nonintervention school category. In the intervention school category, 357 (49.11%) were males and 370 (50.10%) were females.

Table 4

Study Sample 9th Grade Student Demographics

Demographic	Enrollment	Percent
School Type		
2016-2017		
Intervention	431	53.94%
Non-intervention	368	46.06%
	n = 799	100%
2017-2018		
Intervention	411	56.53%
Non-intervention	316	43.47%
	n = 727	100%
Gender		
2016-2017		
Male	393	49.19%
Female	406	50.81%
	n = 799	100%
2017-2018		
Male	357	49.11%
Female	370	50.10%
	n = 727	100%
TOTAL	*N* = 1,526	

Note. Source is from the National Center for Education Statistics (NCES) Common Core of Data database for individual schools and school districts for the 2017-2018 school year. The data listed represent the gender and intervention/nonintervention composition of the 9th grade students in the study sample.

There were 1,526 9th grade students in the study sample. Of the total, 735 (48.15%) were African American, 597 (39.12%) were White students, 112 (7.33%) were Hispanic, 17 (1.11%) were Asian students, 6 (0.39%) were American Indian students; 59 (3.86%) students in the sample were from one or more races.

There were 431 9th graders in the intervention school sample during the 2016-2017 school year. Of those 431 students, 253 (68.70%) were African American. White students represented 126 (29.23%). Thirty students (6.96%) were Hispanic. Students of two or more races represented 14 (3.24%). There were seven (1.62%) Asian students and one (1.23%) American Indian student. At the intervention school during the 2017-2018 school year, there was a total of 411 9th grade student in attendance Of the total, 244 (59.36%) were African American. White students represented 107 (26.03%). Thirty-four (8.27%) were Hispanic. Students of two or more races represented 18 (4.37%). There were four Asian students and four American Indian students (0.97% each) in the overall intervention school sample.

By comparison, there were 684 9th graders in the nonintervention school sample during the 2016-2017 school year. Of those 684 students, 125 (30.41%) were African American. White students represented 197 (47.93%). Twenty-seven (6.56%) were Hispanic. There were 14 (3.40%) students of two or more races represented. Five (1.21%) of the students were Asian, and there were no 9th grade American Indian students in the nonintervention school for the 2016-2017 school year.

At the nonintervention school for the 2017-2018 academic year, the scores of 316 9th grade students were represented in the study. Of those 9th graders, 113 (35.75%) were African American. White students represented 167 (52.84%). Twenty-one (6.64%) were Hispanic. There were 13 (4.11%) students who were identified as being of two or more races. The scores of one Asian student and one American Indian student comprised 0.31% of the 2017-2018 nonintervention school sample. Table 3 displays the number of participants by race represented in the study who attended the Intervention who attended the Intervention school from 2016 from 2018.

Table 5

Percentages and Frequencies, Study Sample Student Racial Demographics

	Intervention		Nonintervention	
Demographic	Frequency	Percent	Frequency	Percent
2016-2017				
African American	253	68.7%	125	30.41%
American Indian	1	1.23%	-	-
Asian	7	1.62%	5	1.21%
Hispanic	30	6.96%	27	6.56%
White	126	29.23%	197	47.93%
Two or More Races	14	3.24%	14	3.40%
	n = 799		100%	
2017-2018				
African American	244	59.36%	113	35.75%
American Indian	4	.97%	1	.31%
Asian	4	.97%	1	.31%
Hispanic	34	8.27%	21	6.64%
White	107	26.03%	167	52.84%
Two or More Races	18	4.37%	13	4.11%
	n = 727		100%	

TOTAL	*N* = 1527

Note. Source is from the National Center for Education Statistics (NCES) Common Core of Data database for individual schools and school districts for the 2017-2018 school year. The data listed represent the racial, gender, and grade level composition of the school district.

After permission to conduct the study was given by the Walden University IRB committee (insert Approval No. here), a letter was sent to the school districts data clerk requesting the 2016-2017 and 2017-2018 literature and Algebra I scores, the discipline referrals, and the attendance records for 9th grade students from the intervention and nonintervention schools. The data clerk of the school district provided the requested data on June 16, 2020. During the study, the data collected for this study was saved on a password protected computer. The data will be deleted from the computer one year after the study is complete.

Participation in the FA was based upon a student's residency and home address of record. Freshman students zoned for the intervention school, in which the FA was located, participated in the FA, while freshman students zoned for the nonintervention school did not.

Intervention Fidelity

One rural school district located in the west central region of Georgia implemented the FA during the 2010-2011 academic school year and teachers and administrators believe it was effective for improving freshman attendance, in and out of school suspensions, and EOC test scores based solely on their observations and anecdotal data and not based on objective and verifiable data. Therefore, this current study was needed to

investigate whether the FA implemented at one high school in located in a rural district in Georgia had an impact on 9th grade students' (a) attendance, (b) behavior, (c) English/Literature Compositions scores, and (d) Algebra I EOC test scores from 2016 to 2018. The purpose of this study is to examine the intervention's impact on 9th grade students' attendance, behavior, English/Literature Compositions scores and Algebra I EOC test scores compared to a control-group school that did not implement the FA.

The intervention school implemented a FA during the 2010-2011 school year as a part of the school restructuring mandates for receiving federal funds and a $4.5 million dollar School Improvement Grant. These funds were a part of the reauthorization of the Elementary and Secondary Education Act of 2010 and Race to the Top challenge. The school's needs improvement status was designated as state monitored in 2005 due to persistent low student performance, failure to make Adequate Yearly Progress, and multi-year low graduation rates less than 60% over three years. The acceptance of the grants mandated a shift in how students were educated and, more specifically, how students were provided with additional supports that came in the form of the FA, with teachers working in teams so as to discuss and monitor student progress and also supplemental support such as tutoring and increased academic and personal advising.

The FA began in the 2010-2011 school year in one of the schools in this current study. The other school did not have a FA. The students in the FA are considered the treatment group in this study. The treatment consisted of students in the FA were assigned one Administrator and one Counselor who only worked with students, teachers, and

programs within the FA. Teachers were organized into teams of four teachers, with each teacher representing a different subject such as Math, Science, English, and Social Studies. Teachers on the same team had classrooms next to each other, and the entire FA classrooms, administrative offices, and counselor were all located on a specific hallway of the school.

Teachers in the FA received professional development the summer before the FA was first implemented. They also received professional development on a weekly basis and also participated in weekly FA meetings. Teachers on the same teams within the FA shared a common planning time. This time was used to plan their classes as well as to discuss student's individual needs. Sometimes planning time was also used to meet with student and parents as a team. The school with no FA had students who experienced 9th grade without any of the aforementioned organizational supports and structures. There were no events that took place that mandated changes within the FA.

The FA was implemented with fidelity through activities and strategies such as reviewing student data and individual student reports, administrative observations, and reviewing and discussing student work samples to ensure student progress and to provide additional support to individual students. Teachers also met to discuss and develop content level lesson plans and analyze student grades and assessments to monitor student achievement. Additionally, teachers and the FA counselor meet to discuss and develop strategies to meet the social and emotional needs of freshman students.

To accomplish the purpose of this study, comparisons were made between two groups of students in relation to a series of educational outcome variables. Specifically, two independent and four dependent variables were to be investigated. The two independent variables were (a) 9th grade students who participated in a FA and (b) 9th grade students who did not participate in a FA.

The first dependent variable originally proposed to be examined in this study was the attendance rates of the 9th grade students who participated in the academy during the 2016-2017 and the 2017-2018 academic years, which was compared to students who did not participate in the FA during the same years. The second dependent variable originally proposed to be examined in this study was discipline referrals of 9th grade students who participated in the academy during the 2016-2017 and the 2017-2018 academic years, which was compared to students who did not participate in the FA during the same years. The third and fourth dependent variables that were originally proposed to be examined in this study were the EOC scores for 9th grade Literature and Composition as measured by Georgia Milestones 9th Grade Literature and Composition EOC and for 9th grade Algebra I as measured by the Georgia Milestones Algebra I EOC, students who participated in the academy during the 2016-2017 and 2017-2018 academic years which was compared to students who did not participate in the FA during the same years.

It was originally proposed that the independent variables were to be absences, discipline referrals, math test scores, and English test scores. However, because the type of schools students attended are viewed as the predictors for the other variables described

above, the originally proposed independent variables were changed to (a) 9th grade students who did participate in a FA and (b) 9th grade students who did not participate in a FA and the dependent variables were the attendance rates, referrals, and 9th grade Literature and Composition and Algebra I test scores during the 2016-2017 and 2017-2018 school years. This shift in the independent and dependent variable designations enabled the results to directly address the research questions using a two-way MANOVA procedure.

Results

A causal-comparative approach was used to investigate the district study site's implementation of the FA, an approach that allowed for a retrospective analysis of the FAs' impact on 9th graders' attendance, behavior (as measured by office discipline referral), and EOC test scores in the areas of Literature and Composition and Algebra I in comparison to a control-group school that did not implement the 9th grade FA. Four research questions were answered during this study. To answer each of the questions, data were analyzed using SPSS 25 to determine if the FAs impacted the attendance rate, the discipline referrals, Literature and Composition and the Algebra I EOC Test Scores between the 9th grade students who attend the intervention school and who participated in the FA during the 2017-2018 school year to the attendance rate, the discipline referrals, Literature and Composition and the Algebra I EOC aggregated test scores between the 9th grade students who attend the nonintervention school and who did not participate in the FA during the 2017-2018 school year. The partial eta-squared or η^2 is reported and is used

as the standard metric for effect size in MANOVA models (Tabachnick & Fidell, 2012). As a rule of thumb for η^2, 0.01 indicates a small effect; 0.06 indicates a medium effect; 0.14 indicates a large effect (Cohen, 1988).

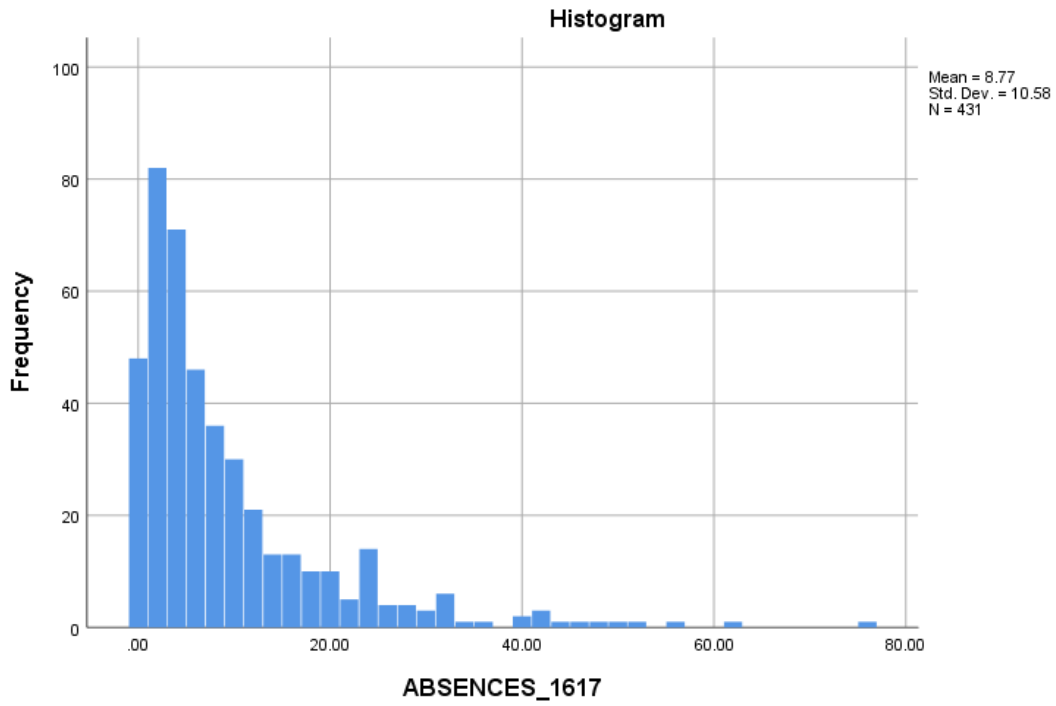
Assumptions Testing for MANOVA

As with any inferential statistics, the two-way MANOVA has assumptions that must be met (Hosmer et al., 2013). These assumptions include normal distribution, linearity, homogeneity of variances, homogeneity of variances and covariances.

Normality can be determined by plotting the data for each dependent variable on histograms and/or boxplots (Ghasemi & Zahediasl, 2012). In this current research study, the sample size was over 300 and the histograms for each dependent variable shows relative normality (Ghasemi & Zahediasl, 2012). Non-normality in these histograms are caused by skewness rather than from outlier data (French, Macedo, Poulsen, Waterson, & Yu, 2008) and indicate normality. Concerning absences for 2016-2017 (n = 431), as shown in Figure 1, the shape of the histogram is skewed in a positive direction (M = 8.77, SD = 10.58)

Figure 1

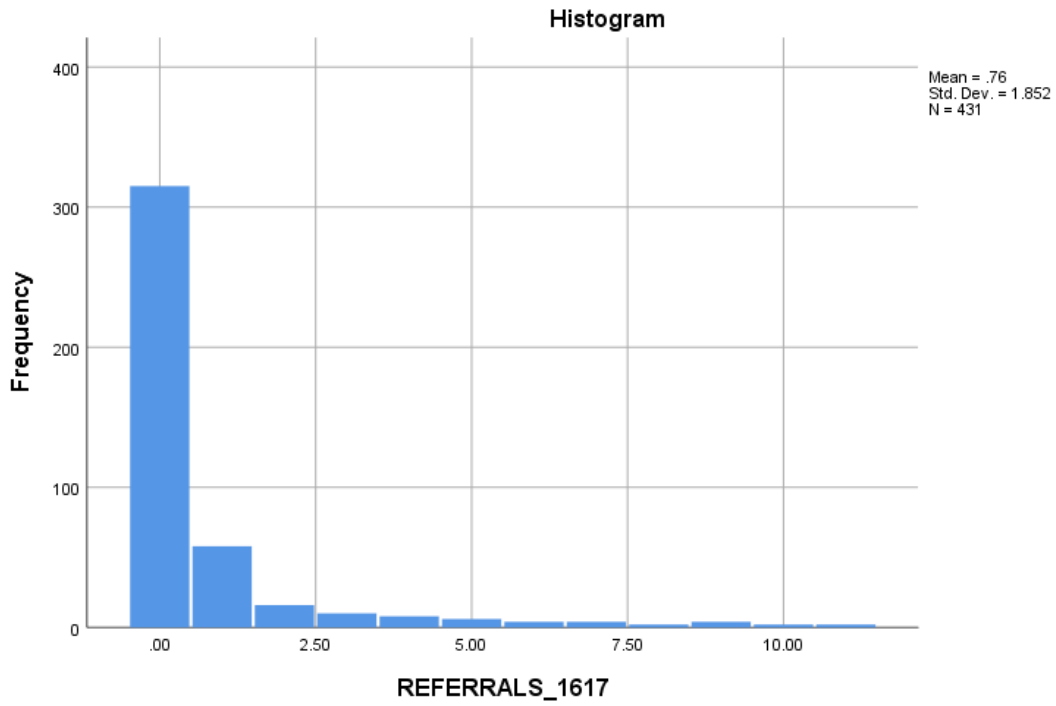
Histogram for Absences for Students in Sample, 2016-2017



Concerning referrals for 2016-2017 (n = 431), as shown in Figure 2, the shape of the histogram is skewed in a positive direction (M = 0.76, SD = 1.582).

Figure 2

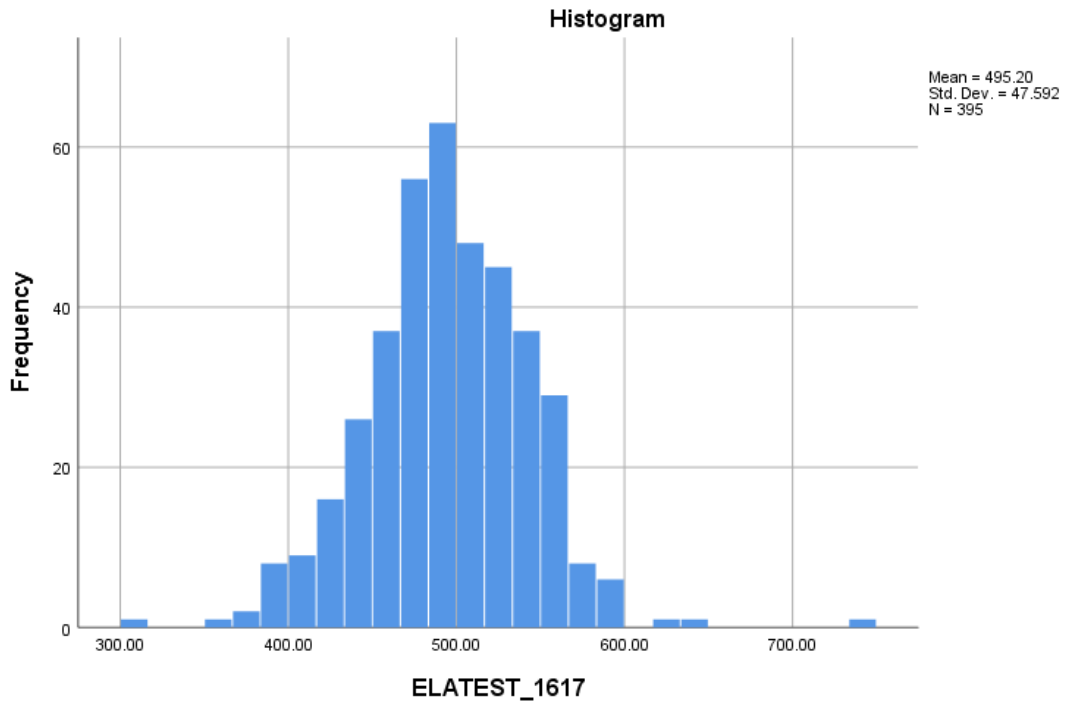
Histogram for Referrals for Students in Sample, 2016-2017



Concerning English Language test scores for 2016-2017 (n = 395), as shown in Figure 3, the shape of the histogram is roughly symmetrical (M = 495.20, SD = 47.592).

Figure 3

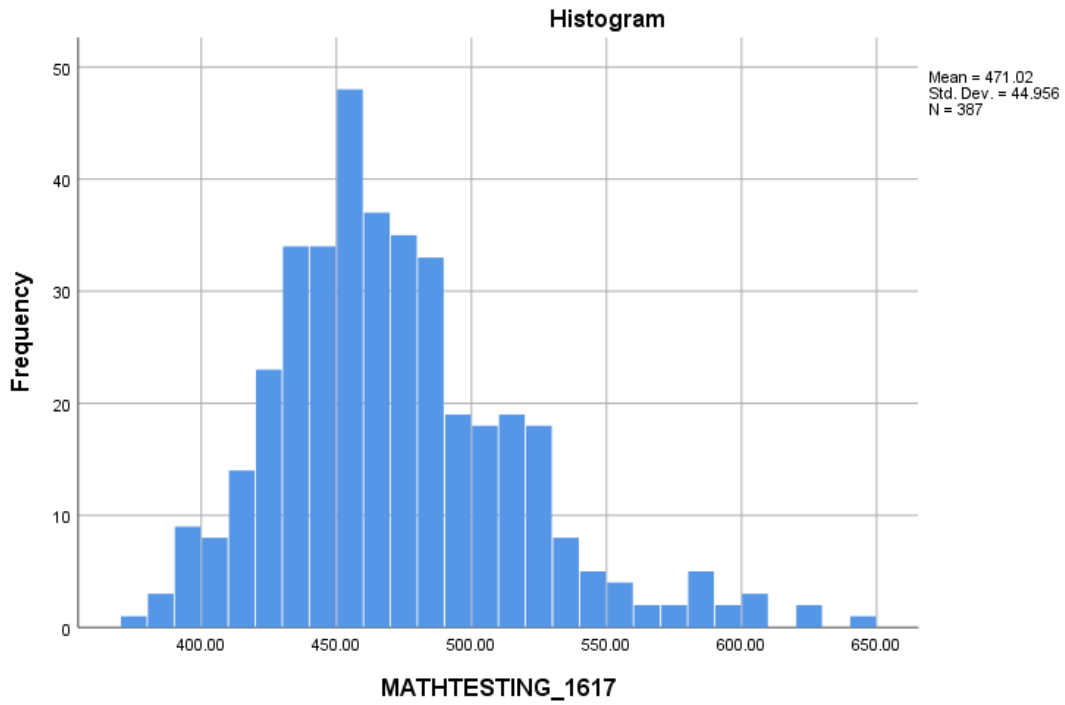
Histogram for English Test Scores for Students in Sample, 2016-2017



Concerning mathematics scores for 2016-2017 (n = 387), as shown in Figure 4, the shape of the histogram is symmetrical (M = 471.0, SD = 44.956).

Figure 4

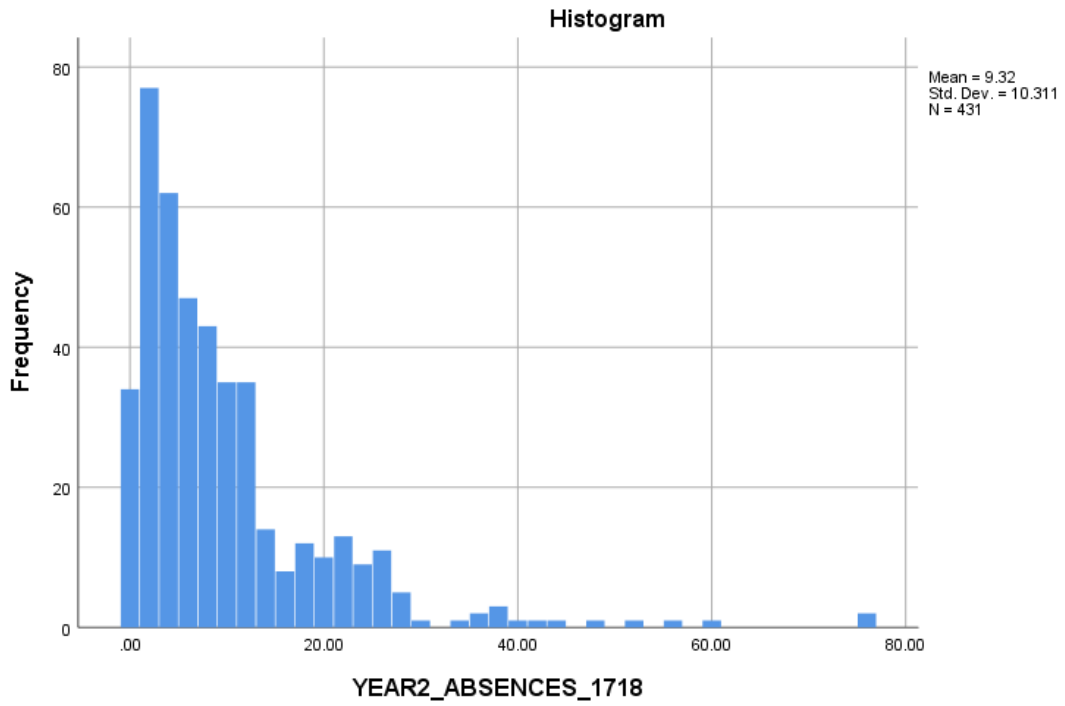
Histogram for Mathematics for Students in Sample, 2016-2017



Concerning absences for 2017-2018 (n = 431), as shown in Figure 5, the shape of the histogram is skewed in a positive direction (M = 9.32, SD = 10.311).

Figure 5

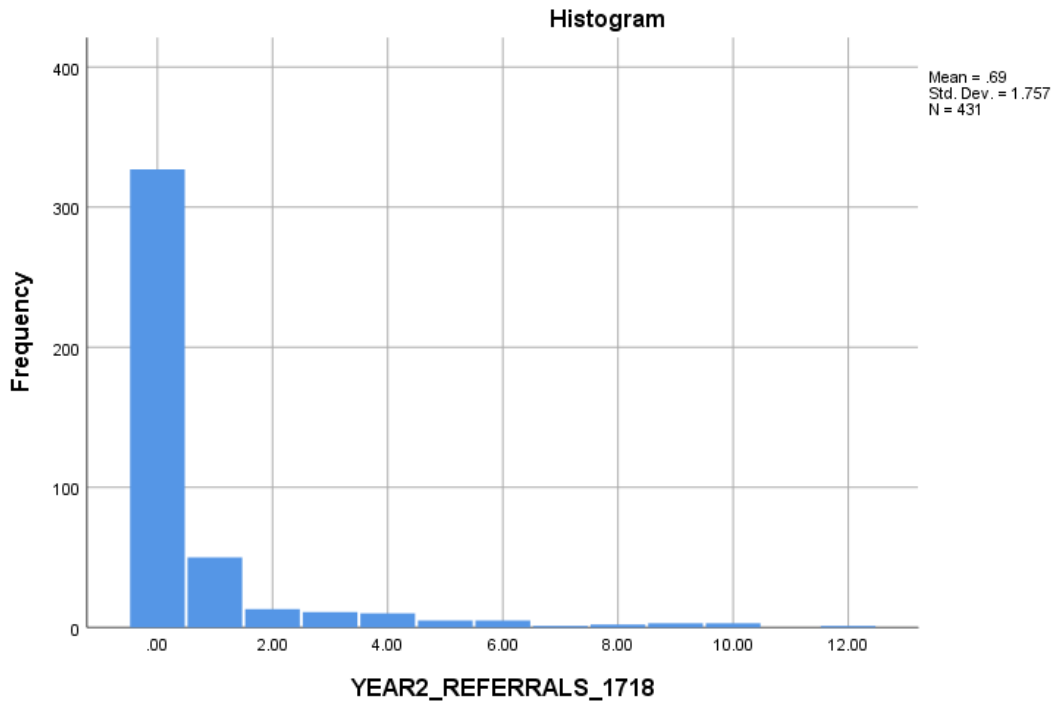
Histogram for Absences for Students in Sample, 2017-2018



Concerning referrals for 2017-2018 (n = 431), as shown in Figure 6, the shape of the histogram is skewed in a positive direction (M = .69, SD = 1.757).

Figure 6

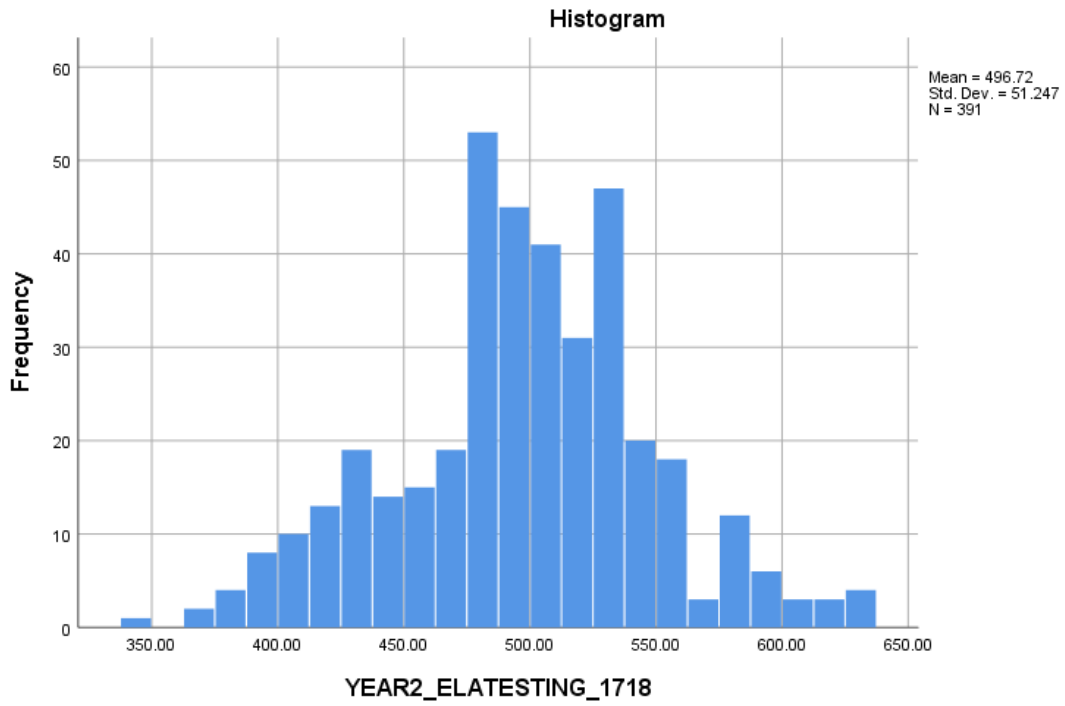
Histogram for Referrals for Students in Sample, 2017-2018



Concerning English language test scores for 2017-2018 (n = 391), as shown in Figure 7, the shape of the histogram is roughly symmetrical (M = 466.72, SD = 51.247).

Figure 7

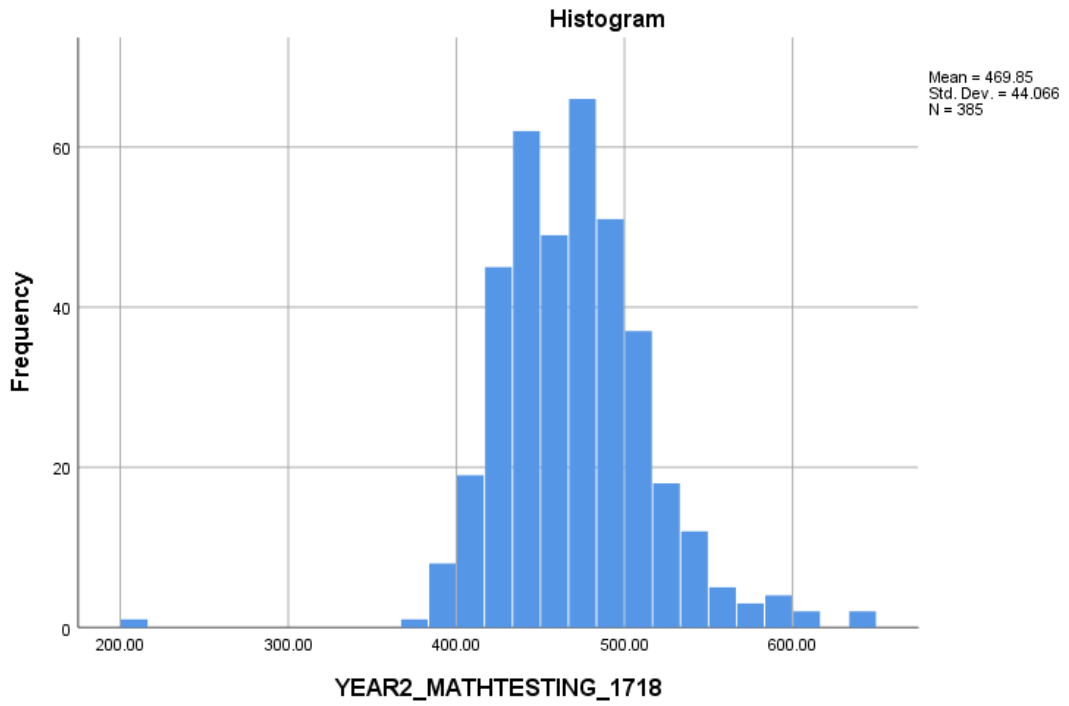
Histogram for English Test Scores for Students in the Sample, 2017-2018



Concerning mathematics test scores for 2017-2018 (n = 385), as shown in Figure 8, the shape of the histogram is symmetrical (M = 469.85, SD = 44.066).

Figure 8

Histogram for Math Testing for Students in Sample, 2017-2018



Another assumption was that the independent variables show homogeneity of variances and homogeneity of variances and covariances (Hosmer et al., 2013). "In multivariate designs, with multiple dependent measures, the homogeneity of variances assumption . . . also applies. However, since there are multiple dependent variables, it is also required that their intercorrelations…are homogeneous across the cells of the design" (French et al., para.11). Homogeneity of variances and homogeneity of variances and covariances were tested using an intercorrelation table. In Table 6, an intercorrelation table is presented with the variables for the dependent variables of absences and discipline referrals for the 2016-2017 and the 2017-2018 school year data. Some significant

correlations did emerge, but not at the level of multicollinearity. Because of this, the assumption of lack of multicollinearity was met.

Table 6

Intercorrelation Table for 2016-2017 and 2017-2018 Dependent Variables, Absences and Referrals

Variables	1	2	3	4	5	6	7	8
1. MAGNET 2016-17 ABSENCES	1.000							
2. MAGNET 2016-2017 REFERRALS	.346**	1.000						
3. MAGNET 2017-18 ABSENCES	-0.018	0.031	1.000					
4. MAGNET 2017-18 REFERRALS	0.005	0.058	.360**	1.000				
5. NON-MAGNET 2016-17 ABSENCES	-0.052	0.004	0.072	-0.093	1.000			
6. NON-MAGNET 2016-17 REFERRALS	-.113*	-0.071	-0.040	-0.043	.301**	1.000		
7. NON-MAGNET 2017-18 ABSENCES	-0.056	0.050	0.074	0.073	0.022	0.019	1.000	
8. NON-MAGNET 2017-18 REFERRALS	-0.082	0.003	0.106	0.039	-0.030	0.051	.275**	1.000

**Correlation is significant at the 0.01 (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

In Table 7, intercorrelations are presented with the variables for the dependent variables of math and English test scores for the 2016-2017 and the 2017-2018 school

year data. Some significant correlations did emerge, but not at the level of multicollinearity. Because of this, the assumption of lack of multicollinearity was met.

Table 7

Intercorrelation Table for 2016-2017 and 2017-2018 Dependent Variables, Math and English Test Scores

Variables	1	2	3	4	5	6	7	8
1. MAGNET 2016-17 ENGLISH TEST	1.000							
2. MAGNET 2016-17 ALGEBRA TEST	.704**	1.000						
3. MAGNET 2017-18 ENGLISH TEST	-0.090	-0.056	1.000					
4. MAGNET 2017-18 ALGEBRA TEST	-.109*	-0.044	.688**	1.000				
5. NON-MAGNET 2016-17 ENGLISH TEST	0.051	-0.054	-0.060	-0.095	1.000			
6. NON-MAGNET 2016-17 ALGEBRA TEST	-0.048	-0.091	-0.084	-.118*	.659**	1.000		
7. NON-MAGNET 2017-18 ENGLISH TEST	-0.065	-0.021	0.041	-0.007	-0.054	-0.008	1.000	
8. NON-MAGNET 2017-18 ALGEBRA TEST	-0.072	-0.065	.159*	0.085	-0.073	0.021	.698**	1.000

**Correlation is significant at the 0.01 (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Research Question 1: Does attendance in FA decrease absences in attendance?

To answer RQ1, SPSS was used to analyze the independent and dependent variables including descriptive statistics analysis, a two-way MANOVA, and partial eta-

squared or η^2 effect size. The η^2 was equal to .056, which indicates a medium effect size was obtained for attendance rates in 2016-2017 and 2017-2018. The results of the two-way MANOVA revealed a significant difference in the absences based on students who attended a FA and students who did not attend a FA, $F(2, 722)=21.58$, $p=.00$; Wilk's $\Lambda=.94$, partial $\eta^2 = .056$. The null hypothesis for RQ1 is therefore rejected. Table 8 displays the descriptive statistics for attendance rates.

Table 8

Descriptive Statistics for Student Absences in 2016-17 and 2017-18 in School with Freshman Academy and School without Freshman Academy

Variable	School Type	*M*	SD	*N*
Absences, 2016-1017	Intervention	8.77	10.58	431
	Nonintervention	4.99	6.28	294
	Average/Total	7.24	9.27	725
Absences, 2017-2018	Intervention	9.32	10.31	431
	Nonintervention	7.00	7.14	294
	Average/Total	8.38	9.22	725

Table 9 displays the tests of significance. For each of the MANOVA tests, the Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, there is a statistically significant result.

Table 9

MANOVA results for Absences, 2016-17 and 2017-18, for Students in Freshman Academy and Students Not in a Freshman Academy

Multivariate Tests[a]

Effect		Value	*F*	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.581	500.443[b]	2.000	722.000	.000	.581
	Wilks' Lambda	.419	500.443[b]	2.000	722.000	.000	.581
	Hotelling's Trace	1.386	500.443[b]	2.000	722.000	.000	.581
	Roy's Largest Root	1.386	500.443[b]	2.000	722.000	.000	.581
School Type	Pillai's Trace	.056	21.580[b]	2.000	722.000	.000	.056
	Wilks' Lambda	.944	21.580[b]	2.000	722.000	.000	.056
	Hotelling's Trace	.060	21.580[b]	2.000	722.000	.000	.056
	Roy's Largest Root	.060	21.580[b]	2.000	722.000	.000	.056

a. Design: Intercept + SCHOOL_TYPE

b. Exact statistic

Research Question 2: Does the attendance in a FA decrease discipline incidences?

To answer RQ 2, an SPSS analysis was conducted to analyze the independent and dependent variables including descriptive statistics analysis, a two-way MANOVA, and partial eta-squared or η^2 effect size. The η^2 of .011 indicated a small effect size for discipline referrals in 2016-2017 and 2017-2018. The results of the two-way MANOVA revealed a significant difference in referrals based on students who attended a FA and students who did not attend a FA, $F(2, 722)=3.84$, $p=.022$; Wilk's $\Lambda=.99$, $\eta^2=.011$. The

null hypothesis for RQ1 is therefore rejected. Table 8 displays the descriptive statistics for discipline referrals.

Table 8

Descriptive Statistics for Student Referrals in 2016-17 and 2017-18 in School with Freshman Academy and School without Freshman Academy

Variable	School Type	*M*	SD	*N*
Discipline, 2016-1017 Referrals	Intervention	.76	1.85	431
	Nonintervention	.41	1.47	294
	Avg/Total	.62	1.71	725
Discipline, 2017-2018 Referrals	Intervention	.69	1.76	431
	Nonintervention	.61	1.59	294
	Avg/Total	.66	1.69	725

Table 9 displays the tests of significance. For each of the MANOVA tests, the Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's largest root, there is a statistically significant result.

Table 9

MANOVA results for Referrals, 2016-17 and 2017-18, for Students in Freshman Academy and Students not in a Freshman Academy

Multivariate Tests[a]

Effect		Value	*F*	Hypothesis df	Error df	Sig.	Partial eta squared
Intercept	Pillai's Trace	.197	88.350[b]	2.000	722.000	.000	.197
	Wilks' Lambda	.803	88.350[b]	2.000	722.000	.000	.197
	Hotelling's Trace	.245	88.350[b]	2.000	722.000	.000	.197
	Roy's Largest Root	.245	88.350[b]	2.000	722.000	.000	.197
School Type	Pillai's Trace	.011	3.837[b]	2.000	722.000	.022	.011
	Wilks' Lambda	.989	3.837[b]	2.000	722.000	.022	.011
	Hotelling's Trace	.011	3.837[b]	2.000	722.000	.022	.011
	Roy's Largest Root	.011	3.837[b]	2.000	722.000	.022	.011

a. Design: Intercept + SCHOOL_TYPE

b. Exact statistic

Research Question 3: Does attendance in a FA improve Literature and Composition scores?

To answer RQ 3, an SPSS analysis was conducted to analyze the independent and dependent variables including descriptive statistics analysis, a two-way MANOVA, and partial eta-squared or η^2 effect size. The obtained η^2 was .035, which indicates a medium-small effect size for ELA test scores in 2016-2017 and 2017-2018. The results of the two-

way MANOVA revealed a significant difference in the ELA test scores based on students who attended a FA and students who did not attend a Freshman Academy, $F(2, 622)=11.39$, $p=.00$; Wilk's $\Lambda=.97$, partial $\eta^2 = .035$. The null hypothesis for RQ1 is therefore rejected. Table 10 displays the descriptive statistics for test scores.

Table 10

Descriptive Statistics for Student ELA Test Scores in 2016-17 and 2017-18 in School with Freshman Academy and School without Freshman Academy

Variable	SCHOOL_TYPE	*M*	SD	*N*
ELA EOC Scores, 2016-1017	Intervention	494.61	48.37	362
	Nonintervention	510.43	51.41	263
	Average/Total	501.27	50.25	625
ELA EOC Scores, 2017-2018	Intervention	497.30	51.74	362
	Nonintervention	507.86	50.45	263
	Average/Total	501.74	51.43	625

Table 11 displays the tests of significance. For each of the MANOVA tests, the Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, there is a statistically significant result.

Table 11

MANOVA results for ELA Test Scores, 2016-17 and 2017-18, for Students in Freshman Academy and Students not in a Freshman Academy

Multivariate Tests[a]

Effect		Value	*F*	Hypothesis df	Error df	Sig.	Partial eta squared
Intercept	Pillai's Trace	.995	63076.628[b]	2.000	622.000	.000	.995
	Wilks' Lambda	.005	63076.628[b]	2.000	622.000	.000	.995
	Hotelling's Trace	202.819	63076.628[b]	2.000	622.000	.000	.995
	Roy's Largest Root	202.819	63076.628[b]	2.000	622.000	.000	.995
School Type	Pillai's Trace	.035	11.389[b]	2.000	622.000	.000	.035
	Wilks' Lambda	.965	11.389[b]	2.000	622.000	.000	.035
	Hotelling's Trace	.037	11.389[b]	2.000	622.000	.000	.035
	Roy's Largest Root	.037	11.389[b]	2.000	622.000	.000	.035

a. Design: Intercept + SCHOOL_TYPE
b. Exact statistic

Research Question 4: Does the attendance in a FA positive affect math scores?

To answer research question 4, an SPSS analysis was conducted to analyze the independent and dependent variables including descriptive statistics analysis, a two-way MANOVA, and partial eta-squared or η^2 effect size. The obtained η^2 was .030, which indicates a medium-small effect size for Algebra 1 test scores in 2016-2017 and 2017-2018. The results of the two-way MANOVA revealed a significant difference in Algebra I EOC test scores based on students who attended a FA and students who did not attend a Freshman Academy, $F(2, 603)=9.38$, $p=.00$; Wilk's $\Lambda=.031$, partial $\eta^2 = .030$. The null

hypothesis is therefore rejected. Table 12 displays the descriptive statistics for math scores.

Table 12

Descriptive Statistics for Student Math Test Scores in 2016-17 and 2017-18 in School with Freshman Academy and School without Freshman Academy

Variable	SCHOOL_TYPE	*M*	SD	*N*
Algebra I EOC Scores, 2016-1017	Intervention	471.27	44.44	350
	Nonintervention	483.35	46.54	256
	Total	476.38	45.69	606
Algebra I EOC Scores, 2017-2018	Intervention	470.63	44.84	350
	Nonintervention	481.13	45.94	256
	Average/Total	475.06	45.57	606

Table 13 displays the tests of significance. For each of the MANOVA tests, the Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, there is a statistically significant result.

Table 13

MANOVA results for Math Test Scores, 2016-17 and 2017-18, for Students in Freshman Academy and Students not in a Freshman Academy

Multivariate Tests[a]

Effect		Value	*F*	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.995	66624.136[b]	2.000	603.000	.000	.995
	Wilks' Lambda	.005	66624.136[b]	2.000	603.000	.000	.995
	Hotelling's Trace	220.976	66624.136[b]	2.000	603.000	.000	.995
	Roy's Largest Root	220.976	66624.136[b]	2.000	603.000	.000	.995
School Type	Pillai's Trace	.030	9.382[b]	2.000	603.000	.000	.030
	Wilks' Lambda	.970	9.382[b]	2.000	603.000	.000	.030
	Hotelling's Trace	.031	9.382[b]	2.000	603.000	.000	.030
	Roy's Largest Root	.031	9.382[b]	2.000	603.000	.000	.030

a. Design: Intercept + SCHOOL_TYPE
b. Exact statistic

Post Hoc Analyses

A post-hoc Tukey's HSD test, a single-step comparison method, was conducted to find means that were significantly different from one another. The groups of students were not all statistically different from one another at the 0.05 nor the 0.025 significance level.

Regarding absences, the FA students in 2016-2017 and 2017-2018 were not statistically different from one another. However, the FA Students 2016-2017 and 2017-

2018 were statistically significantly different from the non-FA students 2016-2017 and 2017-2018 at the *p* value levels of 0.05 and 0.025. Freshman academy students 2017-2018 is statistically significantly different from non-FA students 2016-2017 and non-FA students 2017-2018. The mean differences in absences between the FA students Year 2 and non-FA students Year 1 (MD=4.07) and FA students Year 2 and non-FA students Year 2 (MD=2.36) exceeds the Tukey's HSD cut-off of 1.26 (at the two-tailed 0.05 significance level), which further confirms the significant effect of the IV on the DV, absences, for these variables.

Regarding referrals, the FA students in 2016-2017 and 2017-2018 were not statistically different from one another. Additionally, the FA students 2016-2017 and 2017-2018 were not statistically significantly different from the non-FA students 2016-2017 and 2017-2018 at the *p* value levels of 0.05 and 0.025. The two groups that were statistically significantly different were the FA students 2016-2017 and non-FA students 2016-2017 along with FA students 2017-2018 and non-FA students 2016-2017. The mean differences in referrals between the FA students 2016-2017 and non-FA students 2016-2017 (MD=.334), which does not exceed the Tukey's HSD cut-off of 1.26 (at the two-tailed 0.05 significance level), which is not an honestly significant difference. The mean differences in referrals between the FA students 2017-2018 and non-FA students 2016-2017 (MD=0.26), which does not exceed the Tukey's HSD cut-off of 1.26 (at the two-tailed 0.05 significance level), which is not an honestly significant difference.

Regarding ELA test scores, the FA students in 2016-2017 and 2017-2018 were not statistically different from one another. However, the FA students 2016-2017 and 2017-2018 were statistically significantly different from the non-FA students 2016-2017 and 2017-2018 at the *p* value levels of 0.05 and 0.025. Freshman academy students 2017-2018 were statistically significantly different from non-FA students 2016-2017 and non-FA students 2017-2018. The mean differences in ELA test scores between the FA students 2017-2018 and non-FA students 2016-2017 (MD= -13.38) and FA students 2017-2018 and non-FA students 2017-2018 (MD=11.13) does not exceed the Tukey's HSD cut-off of 1.26 (at the two-tailed 0.05 significance level) and is not honestly significant.

Regarding Math test scores, the FA students in 2016-2017 and 2017-2018 were not statistically different from one another. However, the FA students 2016-2017 and 2017-2018 were statistically significantly different from the non-FA students 2016-2017 and 2017-2018 at the *p* value levels of 0.05 and 0.025. Freshman academy students 2017-2018 were statistically significantly different from non-FA students 2016-2017 and non-FA students 2017-2018. The mean differences in Math test scores between the FA students 2017-2018 and non-FA students 2016-2017 (MD = -13.20) and FA students 2017-2018 and non-FA students 2017-2018 (MD= -11.79) does not exceed the Tukey's HSD cut-off of 1.26 (at the two-tailed 0.05 significance level).

Table 14 displays a hypothesis test summary for each research question.

Table 14

Hypothesis and Results Summary

Null Hypothesis	Test	Results
$H1_0$: There is a statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years. Attendance rates were higher for students not in the FA. A medium effect size was obtained.	two-way MANOVA Partial η^2 Tukey HSD	rejected the null $\eta^2 = .056$, indicates a medium effect size. Concerning attendance: • Freshman academy students in 2016-2017 and 2017-2018 were not statistically different from one another. • Freshman academy students in 2016-2017 and in 2017-2018 were statistically significantly different from the non-FA students in 2016-2017. • Freshman academy students in 2017-2018 were statistically significantly different from non-FA students in 2016-2017 and non-FA students in 2017-2018. • Freshman academy students in 2017-

		2018 had an average of 9.32 absences and non-FA students in 2016-2017 had an average of 4.99 absences and non-FA students in 2017-2018 had an average of 7.00 absences.
$H2_{0:}$ There is a statistically significant difference between the discipline referrals of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years discipline referrals were higher for students in the FA. A small effect size was obtained.	two-way MANOVA Partial η^2 Tukey HSD	rejected the null $\eta^2 = .011$, indicates a small effect size. Concerning referrals: • Freshman academy students in 2016-2017 and in 2017-2018 were not statistically different from one another. • Freshman academy students in 2016-2017 and in 2017-2018 were not statistically significantly different from the non-FA students in 2016-2017 and 2017-2018. • The two groups that were statistically significantly different were the FA students 2016-2017 and non-FA students 2016-2017 along with FA students 2017-2018 and non-FA students 2016-2017. • Freshman academy students in 2016-2017 had an average of .6 referrals and non-FA students in 2016-2017 had an average of .41 referrals. • Freshman academy students had an average of .69 referrals in 2017-2018 and non-FA students had an average

		of .41 referrals in 2016-2017.
$H3_{0:}$ There is a statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years. Students in the FA scored lower than students not in the FA. A medium-small effect size was obtained.	two-way MANOVA Partial η^2 Tukey HSD	rejected the null $\eta^2 = .035$, indicates a medium-small effect size. Concerning ELA test scores: • Freshman academy students in 2016-2017 and 2017-2018 were not statistically different from one another. • Freshman academy students 2016-2017 and 2017-2018 were statistically significantly different from the non-FA students 2016-2017 and 2017-2018. • Freshman academy students 2017-2018 were statistically significantly different from non-FA students 2016-2017 and non-FA students 2017-2018. • Freshman academy students in 2017-2018 had an average of 497.30 in ELA test scores and non-FA students in 2016-2017 had an average of 510.43 and non-FA students in 2017-2018 had an average of 501.74 in ELA test scores.
$H4_{0:}$ There is a statistically significant difference between the Algebra EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.	two-way MANOVA Partial η^2	rejected the null $\eta^2 = .030$, indicates a medium-small effect size.

Students in the FA scored lower than students not in the FA. A medium-small effect size was obtained.	Tukey HSD	Concerning Algebra test scores: • Freshman academy students in 2016-2017 and in 2017-2018 were not statistically different from one another. • Freshman academy students in 2016-2017 and in 2017-2018 were statistically significantly different from the non-FA students 2016-2017 and 2017-2018. • Freshman academy students in 2017-2018 were statistically significantly different from non-FA students in 2016-2017 and non-FA students in 2017-2018. • Freshman academy students in 2017-2018 had an average of 470.63 in math test scores and non-FA students in 2016-2017 had an average of 483.35 and non-FA students in 2017-2018 had an average of 481.13 in math test scores.

Summary

Chapter 4 presented the results, the setting, demographics, and the participant selection process for this study. An analysis of the data was presented, and each of the research questions were answered. The setting for this study was conducted in a large suburban school district located in Georgia which serves 10,960 pre-K through 12th grade students. The majority of the students in the district are White followed by African American students. The total number of students represented in this study was 1,526, with 842 from the intervention school and 684 from the nonintervention school. There was a total of 750 (49.14%) males and 775 (50.78%) females from the intervention and nonintervention schools. Also represented in the study were 735 (48.16%) African American students; 597 (39.12%) White students; 112 (7.33%) Hispanic students; 17 (1.11%) Asian students; 6 (0.39%) American Indian students; and 59 (3.86%) students who were from one or more races.

A quantitative causal-comparative (ex post facto) approach applying a two-way MANOVA model was used to analyze the data. In addition, a partial eta squared or η^2 was used to report the effect size. The null hypothesis for each research question was rejected as there was a statistically significant difference between groups in the absences, the discipline referrals, the English/Language Arts, and the Algebra I scores of the 9th grade students who did and who did not participate in a FA from 2016 to 2018. However, the effect sizes for all four hypothesis tests ranged from small (for RQ2 related to

discipline referrals), medium-small (for RQs 3 and 4 related to ELA and Algebra test scores) to medium (for RQ1 related to attendance rates) in size. A Tukey's HSD post-hoc test was conducted to compare all possible means to see which were significantly different from each other. In regard to the mathematics test scores and the English test scores, while the results from the two-way MANOVA were statistically significant, results from the post-hoc tests demonstrate that the differences between some of the groups were not honestly significant, indicating that students were more similar across groups than the differences in test scores would indicate.

Chapter 5 interprets the findings, discuss the limitations of the study, provide recommendations for future research, and implications.

Chapter 5: Discussion, Conclusions, and Recommendations

Researchers agree that being unprepared for the transition from middle school to high school can be difficult for many students (see, for example, Clemons, 2018; Saddler, 2019; Schaffhuser et al., 2017; Yeager et al., 2016). When teachers and administrators do not address or support students' lack of preparation to meet the demands of high school, this can affect academic achievement and increase absenteeism and discipline issues (Clemons, 2018; Saddler, 2019; Schaffhuser et al., 2017; Yeager et al., 2016). In response to these problems, researchers developed the FA to support students (see, for example, Chemelynski, 2004; Cohen & Smerdon, 2009; Ellerbrock et. al., 2015; Ellerbrock & Kiefer, 2010; Montgomery & Hirth, 2011; Oliver, 2010). The FA was implemented at the rural school district research site in 2010-2011, with hope of improving the transition experience of 9th graders. This retrospective study focused on the 2016-2017 and 2017-2018 academic years and was carried out to examine whether the program did, in fact, improve freshman outcomes related to attendance, behavior, and EOC test scores in the areas of literature, composition, and Algebra I. Eccles and Midgley's (1989) stage-environment fit theory served as this study's framework.

Interpretation of the Findings

Null Hypothesis 1

$H1_a$: There is a statistically significant difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-

2018 academic years and 9th grade students who did not participate in a FA during those same years.

The first null hypothesis looked at the difference between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and 2017-2018 academic years, and the 9th grade students who did not participate in a FA during those same years. With previous studies showing that freshman from minority groups are more likely to drop out of school than freshman students who are not in minority groups, FAs provide a viable intervention that educators can use to improve school attendance and high school graduation rates among such groups (e.g., Barnes & Eadens, 2014; Benner et al., 2017; Emmett & McGee, 2012; Osler & Walden, 2013; Summerksill & Jones, 2013).

Additionally, students in rural high schools who participate in FAs are less likely to drop out of school (Quint, 2006). Veasey (2011) posited strategies such as FAs that provide a supportive environment for students and thus? lessen the potential for them to dropout. The data from this study did yield statistically significant differences between the attendance rates of 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years. However, the medium effect size shows that the FA has less of an impact on the attendance who participated in the FA during the 2016-2017 and 2017-2018 school years compared to those students who did not participate in the FA. For the 2016-2017 school year, the FA students had an 8.77 mean rate of absences, while the

non-FA students had a 4.99 mean rate of absences. In the 2017-2018 school year, the FA students had a 9.32 mean rate of absences, and the non-FA students had a mean rate of absences at 7.00. Findings from the study indicated that for both the 2016-2017 and the 2017-2018 academic years, students who participated in the intervention had lower attendance rates and higher rates of absences than those students at the nonintervention school. There was a slight increase in absences for the intervention group (i.e., +0.55) and a larger increase in absences noted in nonintervention group (i.e., +2.01) in 2017-2018 from the prior year. Additionally, the average rate of absences for students at the nonintervention school increased more noticeably in the second year, 2017-2018, from the previous year.

Attendance at school is important for a students' social, emotional, and academic well-being (Benner & Wang, 2014). In the high school transition, freshman students may have increased absences, which further exacerbates student academic success. Moreover, the amount of increased involuntary absences from factors within the student's family or conditions of his or her life has risen (Birioukov, 2016). Some of these reasons for increased involuntary absences include the following the need to provide care for a family member, lack of transportation, involvement with the juvenile justice system, and health problems in rural settings (Birioukov, 2016). Compared to urban and suburban areas, minority students in rural areas are chronically absent due to involvement in crimes, substance abuse, and poverty (Jones et al., 2011).

Absenteeism is often viewed as a reason for increased negative educational outcomes including students failing classes, being retained in their current grade, and not graduating on time or dropping out of school. In a correlational study on student attendance and academic achievement, Rogers et al. (2016) concluded that school attendance directly correlated with academic achievement and was a strong predictor of high school graduation. Additionally, tardiness adds to this dilemma of student absences by adding additional days if not weeks of cumulative class absences. Other similar studies have offered suggestions in combatting absenteeism including that of improving communication with parents and guardians regarding their child's absences and the long-term consequences of missed school time. While this current research study did not focus on the specific causes of student's absences in the FA, through future research, the specific ways in which the FA may have been instrumental in emphasizing regular and consistent attendance.

Null Hypothesis 2

> $H2_a$: There is a statistically significant difference in the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

The second null hypothesis was tested to determine if there was a difference between the discipline referrals for 9th grade students who participated in a FA during the

2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years. The results from the study specifically indicated that the number of the discipline referrals for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years was lower than the 9th grade students who did not participate in a FA during those same years.

The average referrals for students who participated in the FA during 2016-2017 was .76 in comparison to students who did not participate in a FA in which the average for referrals was lower at .41. The average number of referrals for students who participated in the FA during the 2017-2018 was .69 in comparison to students who did not participate in a FA was slightly lower at .61. Although there was a significant difference, the magnitude of the difference was small.

Additionally, the effect size was small, which shows the FA has less impact on the discipline of students participating in the FA during the 2016-2017 and 2017-2018 school years compared to those who did not participate in the FA. Therefore, the second finding for this study indicates that the FA was not effective for minimizing and lowering referrals among 9th grade students at the intervention school between the 2016-2017 and the 2017-2018 academic years. In contrast, there was only a slight increase (i.e., +0.20) in

discipline among students in the nonintervention school during the 2016-2017 and 2017-2018 school years.

Longobardi et al. (2016) noted that FAs afford teachers and administrators the opportunity to respond to the diverse needs of struggling students potentially leading to decreased discipline incidents. Snipes (2015) also conducted a quantitative study to investigate the effects of the FA on discipline and found a significant difference between the suspensions in favor of students who participated in the 9th Grade Freshman Academy program. Wilcox (2018) determined that freshman transition programs help students, specifically those at risk, succeed with lower major discipline incidents throughout their high school career. In implementing the FA, teachers and administrators did go through professional development and also changed the organizational structure of classes and schedules, but they did not implement a specific strategy such as PBIS.

According to Sinnott (2009), PBIS is "a nationwide effort to develop school-wide systems of support that include proactive strategies for defining, teaching, and supporting appropriate student behaviors to create positive school environments" (p. 23). It has been shown to reduce discipline, increase school safety, improve attendance, and support enhanced academic outcomes (Brownstein, 2009). Based on the findings of this current study, implementing a specific strategy such as PBIS may have had more of an impact on attendance, discipline, and student achievement (Veasey, 2011).

Null Hypothesis 3

$H3_a$: There is a statistically significant difference between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

The third null hypothesis addressed differences between the Literature and Composition EOC test scores as measured by the 9th grade Literature and Composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years. Findings for the third hypothesis indicated a significant difference in the 9th grade literature EOC scores for students who participated in a FA compared to students who did not participate in the FA. For the FA students in 2016-2017, their mean literature EOC score was 494.61, and the nonintervention students in 2016-2017 school year had a 510.43 mean literature EOC score. In the following year, 2017-2018, FA students had a mean literature EOC score of 497.30, just slightly higher than the prior year (i.e., +2.69), and the nonintervention students had a mean literature EOC score of 507.43, slightly lower than their average from the prior year (i.e., -3.0).

Although there was a significant difference, there was a medium-small effect size indicating that the FA has less impact on the 9th grade literature scores of students

participating in the FA in comparison to those students who did not. More specifically, the scores of students who attended the FA increased in the second year, while the scores of students who did not attend the FA decreased in the second year. Therefore, overall results of the current study are inconsistent to the findings of previous research studies which indicate a statistically significant difference between English and literacy achievement of 9th grade students who participated in a FA and those who did not (Buie, 2015; Kern, 2014). To further boost literature EOC scores, teachers can implement reading and writing tutoring that could help students learn important strategies that could increase their comprehension of reading and writing techniques leading to improved literature EOC scores.

Buie (2015) conducted a study in order to investigate the impact of a FA on the academic achievement in literacy of high school students of 151 students who did not participate in the academy, and 275 participants who did participate in the academy. Findings from the study indicated that there was a significant difference in the literacy achievement between participants in a FA versus those who did not participate in the academy. Kerns (2014) conducted a mixed method approach to compare the English EOC test scores, of students who participated in a FA to those of students who did not participate in the academy. Results of the study did not indicate that students who attend a FA their 9th grade year had higher academic performance than students attending a

traditional high school did. In addition to tutoring, integrating more culturally relevant reading and assignments can be used to improve literature EOC scores.

Null Hypothesis 4

> $H4_a$: There is a statistically significant difference between the Algebra EOC test scores as measured by the 9th grade literature and composition EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years.

The fourth null hypothesis addressed the differences between the Algebra I EOC test scores as measured by the Algebra I EOC test for 9th grade students who participated in a FA during the 2016-2017 and the 2017-2018 academic years and 9th grade students who did not participate in a FA during those same years. Findings for the fourth hypothesis indicated that the Algebra I EOC test mean score for the students who did not attend the intervention school during the 2016-2017 and the 2017-2018 academic years was higher than those of the 9th grade students who did participate in the FA.

However, while the scores for the FA students remain about the same, the scores for the non-FA students were stable and unremarkable. The aggregated mean score for students in the FA was lower in 2016-2017 and 2017-2018 in comparison to students at the nonintervention school. Students in the FA had a mean Algebra I test score of 471.27 in 2016-17 and 470.63 in 2017-18 (a -0.64 drop in score) while the students who did not

participate in the FA had an Algebra I mean test score of 483.35 in 2016-17 and 481.13 in 2017-18 (a -2.22 drop in score). However, these drops in scores are not very remarkable. Also, there were no EOC data to compare from previous years (i.e., before the 2016-2017 school year), which might have given some insight into any between group patterns/trends and/or variability or "bounce" in scores from year to year.

The overall results of the current study are similar to the findings of previous research studies which indicated a statistically significant difference between the Algebra I EOC tests of 9th grade students who did not participate in a FA and compared to those who did. Although there was a significant difference, there was only a medium-small effect in regard to the Algebra I scores of students participating in the FA in comparison to those students who did not.

Steffen (2015) investigated whether the FA program increased student achievement and the percentage of on track for graduation students from 2014-2015 compared to freshman from 2013-2014. Findings from the student indicated no statistically significant difference between the Algebra I, scores before and after the implementation of the 9th grade academy. Buie (2015) conducted a study in order to investigate the impact of a FA on the academic achievement in mathematics. Findings from the study indicated no significant difference by gender or by socioeconomic status in mathematics achievement between participants in a FA versus those who did not participate in the academy.

Luna (2017) conducted a causal-comparative research study to investigate whether or not a FA impacted students' Algebra I scores, in which their findings did not indicate a statistically significant difference in the scores of students who participated in the academy and those who did not. McMahan (2017) found that there was no relationship between the ACT Math scores of students who began on a 9th grade campus only and those who started high school at a four-year traditional high school. Because the results of this current study are aligned with that of the previous studies cited, future research could investigate the reasons as to why freshman students have a particularly difficult time with Algebra. To further boost math EOC scores, teachers can implement math tutoring that could help students learn important strategies that could increase their math skills and knowledge leading to improved math EOC scores.

This study aimed to bridge the empirical gap in the literature in terms of FAs. The results from prior studies linked FAs on 9th grade students' attendance, discipline, English/Language Arts, and Algebra achievement are mixed. This study yielded the following findings:

Finding 1

For both 2016-2017 and the 2017-2018 academic years, students who participated in the intervention had lower attendance rates than those students at the nonintervention school. However, compared between the two academic school year periods, there was a larger drop in attendance observed in the nonintervention freshman group than for the

freshmen in the intervention group. While it is not clear what events contributed to the differences, the data suggests that there may be a moderate level practical benefit to the FA's ability to stabilize attendance rates between years; however, a comparison between more school years would be needed to verify this tentative conclusion.

Finding 2

For both the 2016-2017 and 2017-2018 academic years, the FA was not effective in minimizing discipline among 9th grade students at the intervention school during the 2016-2017 and the 2017-2018 academic years. While there was statistical significance, the magnitude of the difference between those students who participated in the FA and those students who did not was a very small practical benefit, suggesting that the FA is not effective for specifically improving discipline (i.e., as measured by reductions in office discipline referrals).

Finding 3

For both the 2016-2017 and 2017-2018 school years, the Literature and Composition EOC test scores for the students who did not attend the intervention school was higher than those for the 9th grade students who attended the intervention school. While there was statistical significance, the magnitude of the difference between those students who participated in the FA and those students who did not was medium-small, which suggests that the FA may not be effective or helpful for improving Literature and Composition EOC test scores.

Finding 4

For both the 2016-2017 and 2017-2018 school years, the Algebra I EOC test scores were higher for the 9th grade students who did not participate in the FA compared to those who did during both the 2016-2017 and the 2017-2018 academic years. While there was statistical significance, the magnitude of the difference between those students who participated in the FA and those students who did not was medium-small, which suggests that the FA may not effective or helpful for improving Algebra I End-of-Course.

Eccles and Midgely's (1993) stage-environment fit theory served as the theoretical framework for the current study. The focus of this study was the 9th Grade Academy and its implementation as defined by Eccles and Midgely's stage environment fit theory. The stage environment fit theory states that "developmentally appropriate and developmentally regressive shifts in the nature of social-emotional well-being during these years" (Eccles & Midgley, 1989, p. 139). The stage environment fit theory was derived from a developmental theory called person-environment fit theory (Hunt, 1975). The person-environment fit theory focused on the importance of viewing an idea that a person's interaction with the environment had to fit their developmental needs to be successful. If the environment is not appropriate for learning based on needs, the academic performance, motivation, and behavior could have declined.

In this study, I attempted to demonstrate that the use of an appropriate academic and behavioral environment could provide the environment necessary to improve student

academic performance. The stage-environment fit theory was employed to study areas of concerns and subsequent short-term gains and was built around the concept of the academic environment and developmental state being connected in order to make learning and behavior.

Change and development during adolescence presents a period of risk (Eccles et al., 1993). One common change that occurs during this period is the transition from middle school to high school. 9th grade students are considered to be an at-risk group as they transition from one school setting to the next. The transition occurs as adolescents are dealing with physical, social, and emotional changes within themselves. Although these changes pose a potential risk for trauma or other negative experiences, Eccles et al. argued that this period of risk could end positively or negatively. According to the stage-environment fit theory, the outcome of this transition depends on the impact of the school environment. If the school environment supports these students and their needs as they transition, the school has the potential to help them overcome the obstacles of this difficult period of development (Eccles & Midgley, 1989). The claim behind the stage-environment fit theory is that the educational environment must meet the needs of students as they develop and also stressed the importance of reducing adverse experiences in children's lives within their daily environment (Eccles & Midgley, 1989).

Matching the school environment with the needs of its students has the potential to increase the positive opportunities for students while increasing the likelihood of

success during the transition to high school. In doing so, the school also becomes a protective factor to promote resilience for students who are at risk during this transition. Also based on the findings of this study, for each aspect of a student's experience, specific proven interventions may have to be implemented such as PBIS to address behavioral issues (Hill, 2013). By implementing PBIS, school may be able to reduce disciplinary incidents, increase the safety of the school, improve student attendance, and help improve academic outcomes.

Limitations of the Study

Several factors contributed to the limitations of this study. First, the availability of rural sites to study represented a limitation. This school district implemented one FA, rather than applying the academy model across the entire district. Likewise, few schools fully operated a freshman grade academy. A second limiting factor was the location of research sites maintaining the initial implementation focus for two years. Although this study examined how the school implemented a 9th grade academy, the need to address specific student needs required the initial implementation to change, thereby changing the constitution of the school. Another limitation was that this study only focuses on the middle school to high school transition. A fourth limitation was the inability to evaluate the implementation fidelity of the academy and to examine the quality of the training teachers/educators received in the use of the FA program. A fifth limitation was the study was a retrospective causal-comparative study design instead of a more rigorous quasi-

experimental design to have more effective control over the variables so as to investigate its efficacy.

Recommendations

The following are recommendations for future research. First, a longitudinal study that explores 9th grade interventions at the end of four years or beyond high school is recommended (Lizar, 2017). Longitudinal information regarding the possible benefits of a FA would be useful for district leaders to determine whether the investment in reorganization, professional development, and faculty and staff time to plan, implement, and sustain a FA results in positive academic and social outcomes. Second, a comparison study could also be done on inexperienced FA teachers and experienced academy teachers in relation to supporting student success. This comparison of new and experienced academy teachers can possibly provide insights on the skills and experience required of teachers within a FA (Kenney, 2017). Thirdly, a program evaluation of 9th grade interventions in different school districts with different student populations to determine the effectiveness of their program on student achievement could also add to the research on this specific topic (Baker, 2010). Fourth, this study should be replicated and extended to compare outcomes associated with the FA implemented in rural and urban schools. Because the leadership team is key to implementation, a final recommendation is to examine the leadership qualities of individuals implementing the academy.

Rural schools are different from urban school in the following ways: urban schools are usually in larger school districts while rural schools are usually smaller districts, urban schools usually have large student enrollment while rural schools usually have declining enrollment, and rural teachers are sometimes less experienced and receive lower pay (Barcinas & McCracken, 1991; Biddle, 2010; Pomoni, 2010). A FA in a rural area may have different areas of focus or may demonstrate different results and impacts than a FA in an urban area due to needs of the students and district resources (Veasey, 2011). However, if the FA is as efficacious as promoters claim it is, the academy model should be able to overcome any differences between rural and urban settings and show relatively equal outcomes.

Implications

Findings from this study indicate the need for further research on various 9th grade interventions. As previously mentioned, not only should educational leaders search for ways to improve the transition of students from middle school to high school, but they must also reflect on the current practices and interventions implemented to ensure student success. The results of the case studies reviewed did not yield statistically differences between 9th grade interventions put into practice and overall student achievement (Buie, 2015; Kern, 2014). Consequently, there is a greater challenge for stakeholders to employ an environment that is conducive for incoming 9th graders. Previous studies have shown that students who view their school environment in a positive manner are more likely to

excel academically (see, for example, Asiayi, 2014; Ellerbrock, 2012; McCoach & Siegle, 2003; McEwen et al., 2010; Thapa et al., 2013).

Furthermore, school administrators may develop new, or continue to make, adjustments to the current transition programs to better prepare incoming freshman to be more comfortable and successful in their new school environment. School leaders can also continue to research transitional issues to ensure their schools are meeting the academic and behavioral needs of all students from their first day in high school to graduation. 9th grade academy teachers may also benefit from more professional development trainings on 9th grade interventions, common planning time, and more instructional supports from building level administrators.

The results of this study indicate that a yearly assessment of the FA may be needed to adjust the initial implementation. For instance, there may be components of an academy that a school district may want to implement such as selecting personnel possessing the following characteristics: innovation, compassion, flexibility, nurturing, and commitment to developing children, grouping students with similar abilities and levels to rotate among assigned teacher, the inclusion of an enrichment period to focus on tutoring, study skills, organization skills, and goal setting, common planning for teams, and mentoring program, assigning upperclassmen. Additionally, if the district desires to continue to use the FA approach, it should only be considered for improving attendance and perhaps providing a feeling of social community among freshmen. Also, if a school

is concerned about improving math, ELA, and behavior, other more scientifically validated interventions and programs should be considered.

Although FAs provide many different forms of support in the transition from middle school to high school, some stakeholders may question the effect of these academies on the transition from 9th to tenth grade. Likewise, there may be a concern that freshman transition academies may offer students a false sense of reality as it relates to high school. Over time, students could be forced out of their small learning communities and enter heavily populated building and halls. Their support systems may disappear as the groups grow to include more students and provide less adult support. This sudden loss of support could lead to low performing tenth grade students and increase the dropout rate during or after the tenth-grade year.

On the other hand, students who experience a FA may also feel more confident when matriculating to higher grades. The different and additional forms of support these students received in the FA may impact positively in ways that are long-term such as increases in self-esteem and the confidence to seek assistance and support. When considering FA implementation, it is also important for stakeholders to emphasize the importance of a FA as a program, not just as another building.

The information obtained could be used to assist district leaders and school leaders in addressing strengths and weaknesses in transition planning for students entering into the 9th grade. More studies are needed to bridge that gap for students

transitioning from middle school to high school. The strategies can include, but are not limited to, providing freshman orientation, summer programs for rising freshmen, and pairing upper classmen students with incoming 9th graders.

Conclusion

This study analysis was designed to explore the impact of the FA and student outcomes. The purpose of this study was to examine the intervention's impact on 9th graders' attendance, behavior, and EOC test scores in the areas of literature, composition, Algebra I in comparison to a control-group school that did not implement the 9th grade FA. Eccles and Midgley's stage-environment fit theory framed this study.

The transition from middle school to high school can present challenges for many students. However, providing supports and teachers who can help these students as they navigate their way through the process can provide a support system students can depend on. Having a successful 9th grade year can help build a foundation of success as they matriculate through high school. If these students do not have support and experience continuous academic failure, this can cause these students to disengagement and or leave school before graduation. While the results suggest that the FA had a moderate practical benefit for improving attendance, the practical benefit/effect on academic achievement and for improving discipline was relatively small. The finding of this study did not show that the current FA implemented in the rural school setting had an overall practical effect on the academic achievement, discipline, or the attendance of the students who

participated in it, but the results can help future research and potentially lead to further conversations among district leaders and schools that could help to determine the best direction for the FA. Based on the findings of this study, each aspect of a FA may need additional, research-based interventions and/or programs such as PBIS integrated within the FA. By including these additional interventions and/or programs, schools may experience decreased discipline incidents, increase feelings of school safety, improved school attendance, and increased student achievement.

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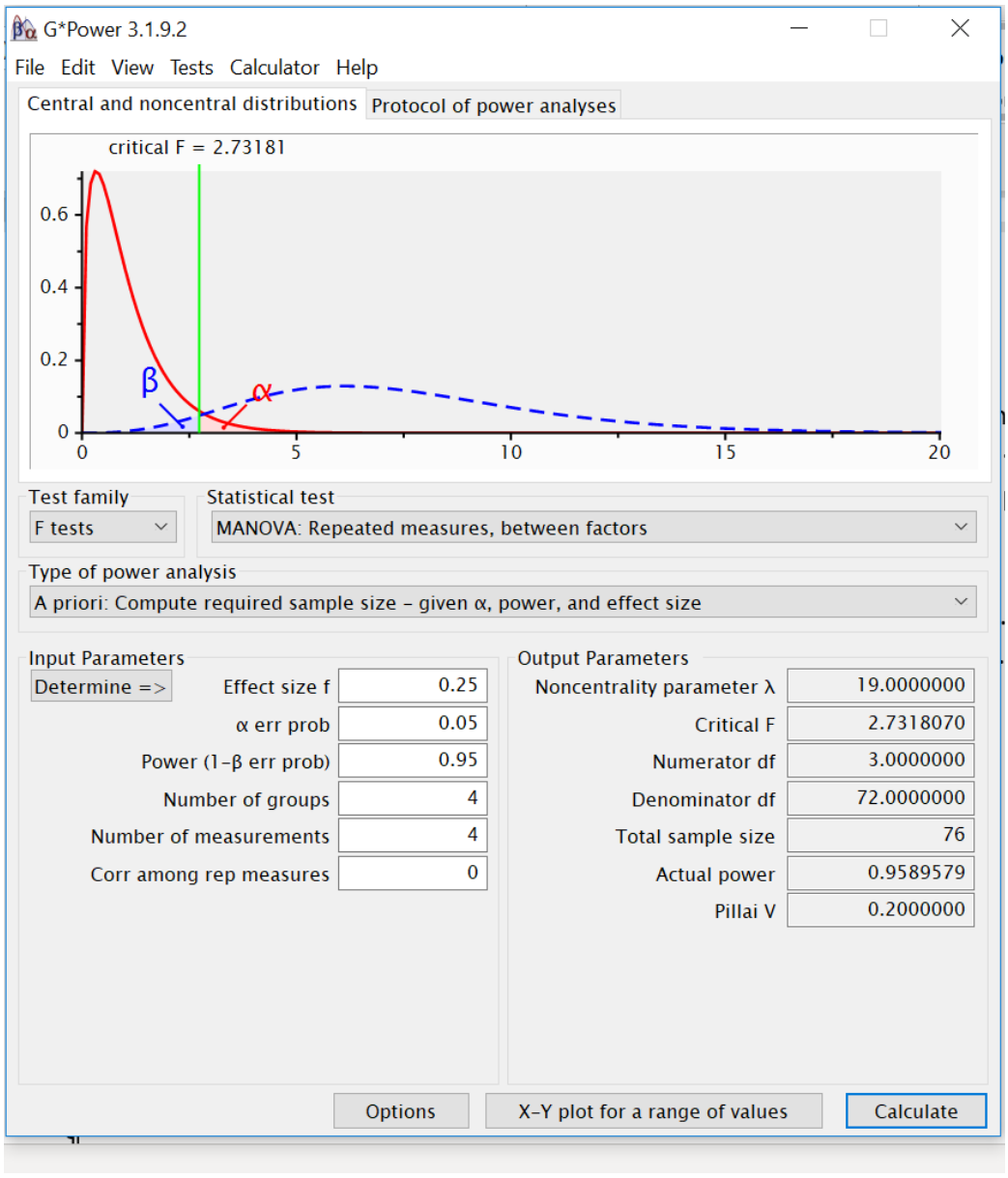
Appendix A: G*Power Analysis



This is an a priori G power analysis. It provides the N necessary when designing a study. This tells you what sample size is needed to detect some level of effect (for this the effect

size is .25, a small/medium effect size). To run a MANOVA for your study, you would need a sample size of 76, so approximately 20 students from each school from each year.

- A priori: compute N, given alpha, power, effect size. The a priori power analysis is what is usually done when designing a study. This tells you what sample size is needed to detect some level of effect with inferential statistics (i.e., with *p*-values).