EXAMINATION OF UPPER SCHOOL PERFORMANCE RELATED TO MIDDLE SCHOOL ATTENDED AT AN INDEPENDENT SCHOOL

A Doctoral Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education
in Professional Leadership

by

Nicholas Justin Accrocco

May 2013

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Dedication

For my students. And my teachers.

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My parents have always believed in education and have always supported my pursuit of knowledge and skills to help try to make this world a better place. My deepest thanks and appreciation to Joseph & Linda, as well as my "other" parents John & Ann.

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Abstract

"The Gulf School," an independent K-12 day school in the southwestern United States enrolls students into their upper school from not only their own middle school, but other area middle schools as well. Since the students enter the upper school from different learning environments, there exists the possibility of differing levels of academic and extracurricular performance. Social interaction and development of social bonds between students will also play a role.

This study evaluated quantitative and qualitative archival data to examine whether the middle school where a student attends had any impact on their academic and extracurricular performance in the Gulf School's upper school as evidenced by admissions data, transcripts, and extracurricular resumes. The study found that students who did not attend the Gulf School's middle school outperformed their classmates who did attend the Gulf School's middle school in terms of academic achievement, while the reverse held true with regard to the frequency of involvement in extracurricular activities. These were also the findings when controlled for gender. However, none of these findings were statistically significant

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Chapter 1
Introduction

My own experience entering an independent school in the midst of 6th grade, and being the "first timer" student myself, inspired my interest in studying how students perform in an academic environment in which other students are familiar, and they (as the new kids in school) are not. While I treasure my years in independent school, I remember feeling out of my element and amongst students from often far more privileged backgrounds than I.

Specifically, this study examines academic performance and extracurricular involvement within the upper school between two groups of students: "lifer" students who attended The Gulf School's (a pseudonym for the real institution) middle school and "first timer" students who attended middle school elsewhere. The "lifer" group is already accustomed to the academic and extracurricular environment while the "first timer" group is not. This study seeks to explore any potential differences between the levels of academic achievement and/or extracurricular involvement of the two groups.

Independent schools often enjoy a reputation as being "good" schools (Eisenstock, 2006), and I seek to investigate part of the reason for this rather popular perception held by greater society. The Gulf School is a highly regarded, highly selective, independent day school. By examining who attends an independent school, such as the Gulf School, and how they perform upon on enrollment, my hope is that this study could

contribute to conversations about the basis for school reputation and/or understanding about making "first timer" students feel more welcome within a new environment.

In beginning this study, there were four main likely research outcomes: the lifer students outperformed the first timers in both arenas, the first timers outperformed the lifers in both arenas, a combination of these first two possibilities, or lastly a student's attended middle school showed no significant differences in performance in either arena suggesting that the role of the student's demographics eclipsed any effect from their middle school. This is personally important to me because I remember as a "first timer" myself feeling out of place at times and it took me a solid school year to learn the new academic and social landscape that I had entered.

Culture, socioeconomic class, and academic aspirations will all play a role in how well a student does once enrolled in the upper school. My professional experience as an undergraduate admissions officer for two ultra-selective universities has given me a broad look at the different types of school communities that exist in the United States. Currently, I work as a college counselor at the Gulf School. My professional experience, which allowed me to observe many types of schools, led to my curiosity about the questions of this study. It is for these reasons that why I want to put my own school under a microscope.

Brief Review

The literature review entails the history of schools in the United States, school choice, the secondary school admissions process, and adolescent socialization. It is essential to understand how we arrived at the present marketplace of educational institutions to choose from at the primary and secondary levels. This narrative helps to

explain how American diversity from the beginning of the nation to the present day played a key role in determining who gets educated, what they are taught, and whom their classmates are. Further topics in the literature review will examine who is admitted to independent schools and why, along with the socialization of adolescents.

The history of American education explains the two-hundred year expansion of schooling and the reasons for the many different types of schools in existence today (Taylor, 2010). The changing demographics of the United States with particular regard to race, ethnicity, gender, socioeconomic status, and geography have always shaped, and continue to influence, what the "marketplace" of education institutions offers. However, wealthier parents will enjoy more choices than socioeconomically disadvantaged parents (Abdulkadiroglu & Sonmez, 2003). Parental desires for a quality education consistent with their values was often the catalyst for the development of these types of institutions (Baines 2006). Understanding who these parents are and what motivates them will tell much about the students themselves and their upbringing (Buddin, Cordes, & Kirby, 1997).

A critical time to further investigate the motivations of parents who desire to send their children to independent schools is the admissions process (Eisenstock, 2006). The literature suggests that their sociological characteristics help to explain why they seek out independent schools and how they behave during the admissions process (Shuster, 2009).

Middle school students are largely at an age where adolescence has fully begun, yet maturity remains in the relatively early developmental phases. How and why a student feels at place in his or her school community is additionally crucial in examining student performance after their transition as upper school students. The transition from

middle to upper school is one that puts tremendous stress on the student to fit into to their new environment (Wentzel, 1997). Research has found benefits to not only a student belonging within a group but with whom they associate (Kinney, 1993). These benefits include stronger academic performance and a greater sense of self-esteem.

Statement of the Problem

Independent schools have largely been viewed by greater society as exclusive institutions for the wealthy. In fact, this perception was so common in the minds of the public that private schools sought to be referred to as "independent schools" to broaden their appeal (Powell, 1999). There is another common perception that independent schooling prepares students better for academic success and offers them more chances for extracurricular involvement (Figlio & Stone, 1997). As a direct result of independent schools being viewed as better adept for preparing students for college and life, the competition for admission has increased greatly (Lohr, 2000).

While independent schools' origins can be attributed to the public perception of exclusivity, they have sought to be more inclusive of the greater socioeconomic, religious, and ethnic diversity found in the modern American population (Hartsell, 2011). Independent schools are now trying to balance the desires of their traditional clientele (i.e. affluent Caucasian families) with the growing diversity of the country (Figlio & Stone, 1997).

Independent schools are popularly thought to be "good" and the students who attend, in turn, are thought of as "good students" (Eisenstock, 2006). This study examines how students with many different characteristics (sex, socioeconomic status, legacy

status, etc.) perform in an independent upper school in relation to where they attended middle school.

Although the examination of these questions may pertain primarily to independent schools, there are implications for education administration as a whole. Middle school to high school is one of the largest transitions in a student's education and it occurs at time when they are experiencing the throes of adolescence. By studying how students, of all backgrounds, excel or not within an independent school and why will lead to better understanding of the mission of independent schools, the admissions processes at independent schools, and the overall wellness of students transitioning into high school. Ultimately, this study may aid independent schools in assessing their identity, their goals, and how best to serve the increasingly diverse nature of their student body.

Purpose of the Study

What is at stake here is determining who independent school students are and how those characteristics play a role in their academic and extracurricular success. For the research subject of the school itself, the administration and faculty may learn facets of how the transition from middle to upper school develops in similar and/or different manners between the "lifer" students in comparison to the "first timer" students. Because the students' previous school experiences are different, but the environment is the same, the students will likely have different experiences. This study seeks to better understand what these differences are, leading to possible suggestions for administrative policy changes with admissions and/or student support.

The significance of the findings help to better understand and assess school performance in general with specific regard to how independent schools might be

assessed. The researched institution enjoys recognition in the independent school community and the college admissions landscape worldwide. If the school is regarded as being of high quality, (or as parents and students would say: "it's a 'good' school"), then it would follow that the reputation is based on results and approach. Moreover, the "lifer" students likely would be better prepared for the upper school because not only is the school of high quality, but those students will also have formed peer groups and a comfort with being on campus.

Table 1.1

Study's Research Questions

Research Question	Data Sources	Collection Procedure	Data Analysis
1) Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
2) Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
3) Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
4) Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder	Admissions data and student records	Requested from appropriate campus departments	Frequencies and Percentages

middle school based on gender?	and divisions

Definition of Terms

Cohort: For the purposes of this study, there are two cohorts consisting of an entire graduating class within the Gulf School. Cohorts "1" & "2" refer to the graduating Gulf School classes of 2013 & 2014 respectively.

Extracurricular Activity: Any club a student belongs to within the Gulf School outside of classroom instruction. These include athletics, fine arts, performing arts, academic clubs, community service, or affinity groups based on ethnicity.

Independent School: A private educational institution that teaches to grades Pre-Kindergarten-12 or any band of grades therein.

Independent School Entrance Exam [ISEE]: A standardized test used in independent school admissions

First timer: A student who did not attend the Gulf School's middle school, but is enrolling in the high school.

Lifer: A student who attended both Gulf's middle school and is also enrolling in the high school

Limitations

This study has limitations due to the fact that only one independent school was researched. Aside from the numerical population sample of one school community limiting the scope of the study, there is the additional fact that the school studied is an elite independent school (due in large part to its prestigious reputation and rigorous academic standards) that is arguably more anomalous than many of its "peer" independent schools.

For this study the students were separated into two main groups: “lifer” students (students who entered the Gulf School community to attend lower school and/or middle school), and “first timer” students who entered 9th grade from a different middle school. The population of lifers to new arrivals has a ratio of approximately 2:1. Part of the reason for this difference is due to the fact that the upper school graduating class sizes are significantly larger than the middle school graduating classes (approximately 140 in the upper school classes compared to approximately 100 in the middle school classes.

Chapter 2
Literature Review

Before this study commenced, a review of the literature was conducted. The history of American education is essential in understanding the current Kindergarten-12 grade landscape and the choices parents make by sending their children to an independent school versus a public one. Education is an essential part of civilized society in the United States, and parents have a wide marketplace of schools to choose from to educate their child. Yet not every family will have the economic resources to partake in school choice and/or the knowledge that these institutions are available to them through financial aid or scholarships.

Understanding the types of families that have access to and choose independent schools makes it easier to explain how and why these parents do this. There also exists a culture of affluent parents providing every resource necessary towards the success of their child (Eisenstock, 2006). This behavior is a privilege enjoyed by the upper socioeconomic class that presumably most parents would also exhibit if they had the means. After all, parents tend to love their kids.

Thus, the literature reviewed illustrates how the current situation of school choice developed over time in the United States, with a focus on Horace Mann, who envisioned the United States education system soon after the Revolutionary War; (Mann, 1865) why some parents have more choices for their students than other parents; the reasons for sending their child to a particular school over another; and lastly how student socialization occurs within middle and high school students.

The Origins of Public and Private Education in the United States

Brief evolution of American education. The education of the general population remains a constant challenge for governing officials. An educated population has been shown to reduce crime, improve the economy, and lessen the class struggle that undermines human progress (Freiberg & Driscoll, 2005). In the United States, free public education for the masses started with the first ever person to hold the title of "Secretary of Education:" Horace Mann. His vision for education would establish the foundation for public schools (and, in time, private and parochial schools) that the United States uses in the modern day (Taylor, 2010).

It would likely come as a surprise to most modern day Americans that the United States Constitution does not even discuss the topic of education (United States Constitution, 2011). There is no "right" to education outlined in any of the main documents which form the bedrock of American society and government. Yet, education of the masses is, in many ways, recognized by the American people an additional layer to keeping a civic society that theoretically and statistically lessens poverty, crime, and human suffering (Taylor, 2010).

While education is not a "right" guaranteed in the Constitution of the United States, the government, from local school boards to the federal Department of Education, all have much interest in the enterprise of educating the population. During the presidency of George W. Bush, the "No Child Left Behind Act" created standards of accountability for the national public schools. While this law was very much in the spirit of what Mann had wanted for his country, the law is not without problems to which Mann would object (Hayes 2006). Thus, the idea that all should be educated for the

individual and societal good remains the central tenet of the public school system, yet the course and strategy for implementation remains a struggle played out from the local communities to the state and federal governments.

The new nation. The United States of America is a relatively new nation on the world stage. Upon the foundation of the country after the Revolution against the British crown, questions emerged as to how much influence the new government for the people by the people would have in the new nation of the states (Peterson, 1970). After all, there were two conflicting forces at work. On one hand, the United States was trying to be a free, self-actualizing society that leaned toward the notion of letting local interests and desires prevail in the shaping of matters of governance and society. Yet, there was the reality that the new country had to prove itself on a large societal scale; especially given the fact that the Americans had successfully overthrown arguably the most powerful country at the time: the British Empire (Peterson, 1970).

Like any military conflict, the roots of this Revolution can be traced to one group wanting something that they do not have. Be it money, political power, and/or land, the disparity of these desirable assets cause humans to fight amongst each other. The twentieth century philosopher Pierre Bourdieu wrote much on the idea of "capital" and how it can take on many forms. In essence, he theorized that one form of capital could be traded for another (Bourdieu, 1977). For example, one could pay tuition ("economic capital") to a school and gain a degree ("social capital") of being amongst the educated fellow citizens and "symbolic capital" of having cultural refinement (Bourdieu 1977). This will then lead to the acquiring of more "economic capital" (Knauft, 1996). This main theory of different types of capital and the differences within them suggests that

class conflicts are not just based on pure economic assets of wealth, but on the cultural knowledge and privileges that often accompany education. Rephrased: class struggles are not merely about money, but knowledge as well.

Horace Mann and the common school movement. Horace Mann was born in the politically powerful (post-Revolution) Commonwealth of Massachusetts, (ironically and perhaps appropriately) in same year that the Declaration of Independence was signed: 1776. He grew up in a poor agricultural family of rather modest means. His formal schooling would consist of a mere 8-10 weeks a year which paled in comparison to that of his wealthy peers (Mann, 1865). The memories of these humble beginnings would remain with Mann throughout his adult and professional life and inspire his work in attempting to fix the disparities in society and educate the masses.

While he held several offices in government, his most famous was (and remains) his work as the first ever American Secretary of Education for the Commonwealth of Massachusetts. Not only was this a new role for the new state, but a new role in the history of the United States. Unbeknownst to Mann and his contemporaries, his vision and work would lay the foundation of American education for decades and centuries to come (Hayes, 2006).

It is noteworthy that Mann grew up in the post-revolution United States. A new nation with an ideology that promoted fairness and the belief that everyone, regardless of sociological statuses, could be successful and thrive (Brick, 2005). Determining what "equal opportunity" meant within education has often been debated without much consensus. One of the most celebrated "founding fathers," Thomas Jefferson, held the belief that some were divined with natural talents and strong mental faculties whereas

others were not (Brick, 2005). For Jefferson, education would be for the chosen few who were naturally talented from birth. The idea that "all men are created equal," immortally penned by Jefferson in the Declaration of Independence, may have been espoused and promoted by Jefferson politically and civically, but not when it came to education (Peterson, 1970).

Mann's approach had two important departures from Jefferson's philosophy. First, growing up in the newly formed United States, a country largely based on the "ideas" of liberty, freedom, and opportunity, Mann believed in the potential of anyone to succeed in America. For Mann, no one was limited by any perceived lack of natural abilities. This first belief created the conditions for Mann's major ideology and ensuing public campaign that education should be available to all and largely standardized (Brick, 2005). Jefferson rebelled against a society of rigid political and economic hierarchies with no system of formal schooling or even a desire to help the common good at the expense of the "haves." Thus, it follows that Jefferson saw education as largely private matter for those with the innate intelligence to develop themselves into something more. However, Mann grew up in an idealistic young country that championed equality (at least in theory given the status of the poor, women, and non-Caucasian citizens or, at the time, slaves). These differences would create the conditions for the growth of the common school movement in early American history to the vast array of schools available for families to choose from in contemporary times (Hayes, 2006).

Mann as Secretary of Education. In his newly appointed and created role as Secretary of Education for the Commonwealth of Massachusetts, Mann possessed great power and, in turn, great responsibility. First, given his successful career as a legislator,

he would have the political capital to do great things across the state (Mann, 1865). Massachusetts was quite a powerful and influential state in the early days of the nation; what Mann accomplished there would likely spread. These conditions combined with Mann's passion for education and belief in its beneficial effects for the country would create the momentum for nationwide change and universal implementation in public education (Mann, 1965).

Mann sought to rid greater society of its ills and help advance all people; no matter what their background or socioeconomic status. Mann's vision could be outlined as follows: Education should be free for all so as not to deny the benefits of academics or limit the effects of these benefits based on a student's current standing in society. Students would be taught a morality with Judeo-Christian roots that did not favor any given sect of Christianity; (this was initially key in order for Mann to get popular support as it was a comprise between the religious expectations of the masses even though he later encountered the inevitable criticisms that the religious nature of his schools "favored" one sect over another). This education would prepare the students for civic life and engagement where they would hopefully participate in government due to a fostered love of country (Hayes, 2006).

Religion would become the most transformative issue for the common school movement in the decades and centuries to come, unbeknownst and almost certainly to the horror of Mann (who would be particularly wounded by criticisms of his favoring a certain denomination of Christianity or, worse still, not being a Christian at all) (Mann 1865 & Copeland, 2009). Mann proposed that all students have a Christian-Unitarian, (i.e. nondenominational Christian) based education in the common schools (Brick, 2005);

this was something that would almost certainly face legal and political challenges with issues surrounding the eventual separation of church and state in modern times.

However, Mann underestimated not only the importance families would place on their own faith being the basis for education and not a nondenominational approach, but also the diversity of religious beliefs that Americans would bring with them as they immigrated to the United States from around the world (Copeland, 2009). Consequently, the first independent schools were institutions with a clearly defined religious affiliation so that parents would be assured their children were being educated within their faith tradition (Hayes, 2006).

Constraints on Mann's ideal vision in modern times. For Horace Mann, common schools would be of a high quality with a standard state mandated curriculum (Taylor, 2010). However, they would be multicultural microcosms as well. All would be welcome and all would get the same education regardless of any sociological or ethnic differences. This would be especially true in terms of socioeconomic status. Mann wanted all students to have the same opportunity and probably would agree that regardless of the economic capital enjoyed by some (as Pierre Bourdieu suggested in his capital theory), all should be entitled to the same opportunities that would yield the individual not only economic capital but social and symbolic capital as well (Mann, 1865 & Knauft, 1996).

In modern times, it is easy for many an educator (or politician) to champion such causes. However, the implementation of this is quite difficult. First, school districts are based on population and are funded by the tax payers found within them. Because American neighborhoods tend to have similar demographics, the student bodies are

unlikely to be a diverse multi-cultural microcosm of the nation as a whole (Hayes, 2006). In terms of income, and, in turn, school resources, these will also vary depending on the socioeconomic status of the students. It then comes as no surprise when the wealthier students tend to succeed at a higher rate academically (Perkinson, 1995).

In order to implement Mann's ideal, two major obstacles would have to be addressed. First, the students would have to be bussed in from different parts of the community to create the student bodies that Mann had hoped for; a move that is at best impractical and would certainly receive resistance from parents for many reasons (e.g. desire for a more homogenous school experience, distance from the family home etc.). Second, school funding would have to be equal for all districts no matter who attended them or how well the school performed. This would be politically difficult (to say the least) and also does nothing to address the issues of income inequality and the correlation to academic performance (Hayes, 2006).

Lastly, it is important to note that Mann's era was a much more homogenous time in America demographically. Most of the population of the country was Caucasian and Christian (Brick, 2005). Today, the United States is the most diverse nation on earth with every race, ethnicity, and religion represented (Copeland, 2009). While Mann wanted a Christian based education that helped build character, modern public schools are essentially secular by law (Hayes, 2006). Thus, Mann's ideals were more obtainable during his era than by what he might encounter today. However, while Mann faced resistance that his religious curriculum was did not have the "right" denominative religious beliefs, in modern times he would have to contend with the fact that he wanted the common schools to be religious in the first place. Both chronological situations

suggest that with an American government that champions freedom of religion and separation of church and state the effort to inject spirituality of any kind within a public owned education system is fraught with many political challenges. After all, religion tends to involve what will ultimately happen to one's soul for all eternity, so it follows that parents will be anxious, suspicious, or vocal of what the state might be instructing their children on such deeply important and deeply personal matters (Brick, 2005).

For these reasons, some have argued that independent schools exist because "one size does not fit all" and that a given independent school exists to create an institution that a category of families desire (Copeland, 2009, 262). As the old proverb holds, if "necessity is the mother of invention," then independent schools are "invented" to address the "necessity" that some families want their students' academic instruction to be something different than what all families would receive through the common, public schools. Perhaps the biggest argument against Mann's ideology and vision is the fact that the United States was more diverse, in virtually every aspect, than he appreciated during his time, thus causing the objections that he encountered from the population during his term of office. In fact, ironically, much of the lower socioeconomic classes objected to Mann's goal of educating their children in the hopes of bettering their lives and economic promise. The main reason for this was the fact that if Mann was sending their children to school, the family would lose the labor of the child towards their household income (Baines, 2006), with American child labor laws over a hundred years away. The diversity of the modern United States dwarfs the diversity of Mann's time, further creating major obstacles to his standardized, common school ideal.

Independent Schools as a byproduct of governmentally created common schools. As aforementioned, the first independent schools would be created to address the religious concerns families held. Overtime, secular independent schools would be created for families. Their creation was justified by spoken platitudes about a different approach to education as opposed to the one employed by the common schools. Mann saw the common school as a panacea to all social ills from poverty to crime rates (Baines, 2006). Education was supposed to be a society equalizer in Mann's view. However, parents are largely disinterested in their children being the same as everyone else (e.g. they want the "best" for their child) (Baines, 2006). Moreover, they might like the educational approach an independent school uses, whether it be religious affiliation and/or academic philosophy.

Lawrence Baines explains these issues clearly in his article on Mann's ideas in modern times, "Does Horace Mann Still Matter?" stating:

> One of the obstacles to implementing Mann's philosophy has always been that the wealthy have little incentive to abandon their privately run, well-appointed institutions, within which they wield significant power for the motley vibrancy of the democratically controlled public school. Still, Mann managed to communicate that all Americans, especially the most affluent, had a shared responsibility for the future of the country. 'If one class possesses all the wealth and the education, while the residue of society is ignorant and poor, it matters not by what the name the relation between them may be called: the latter, in fact and in truth, will be the servile dependents and subjects of the former" (Mann, 1965, p. 124).

> Certainly, the phenomenon of 'bright flight' from urban schools has demonstrated that the sense of societal obligation can be ephemeral, especially when it comes to the nitty-gritty of school choice. (Baines, 2006, p. 270)

Mann's appeal to the upper-class was that by having all economic classes together, it would lessen (or probably in Mann's most idealistic assessments: eliminate) the societal problems faced by all. These appeals were often based on some Christian thinking of caring for the greater good (Mann, 1865).

However, the upper-class never truly cooperated as there was "little incentive," for them to do so (Baines, 2006). It is unlikely that the upper-class would give their hard earned money and/or discard some of their most cherished religious beliefs towards the good of all when they could have all they wanted for their children at an independent school. With the rise of the common school movement, so to was the rise of the parochial and independent school movement. The wealthy went to private schools and the best teachers followed (Downs, 1974). Eventually, common schools were thought of as "pauper schools," and the private schools were seen as "better" within the popular consciousness as a whole, but especially the upper-class (Downs, 1974, 35). Mann optimistically tried to solve income inequalities amongst the haves and the have-nots, but the haves would have none of it.

The demand for independent schooling from the upper-class is well-documented (Lohr, 2000). Naturally, those with higher incomes are the ones largely in-the-market for sending their children to an independent school. One study found, not surprisingly, that the families who typically chose independent schools are largely undaunted by the often

high tuition costs (Buddin, Cordes, & Kirby, 1997). Moreover, the more educated the parents, the higher the demand for education with a specific preference towards private schools (Coleman, Hoffer, & Kilgore, 1982). These notions are excellent examples of Bourdieu's theories of the different forms of capital and the compounding effects that having a large amount of one form of capital often leads to the acquisition of even more capital (Knauft, 1996). Furthermore, students aspire to meet their parents' expectations and often emulate the behaviors and ideals of their parents. This suggests that the next generation will act much among the same lines with raising their own children (Parsons, Adler, & Kaczala, 1982). Assuming they have the economic means that their wealthy parents had, they will have access to many options for the schooling of their children.

The School Choice Marketplace

Market forces in education. Parents tend to want what is best for their children and the school that a student attends is of paramount concern to them, as it is these institutions, and the faculty teaching within, that will shape the young minds, mores, and attitudes of their children (Eisenstock, 2006). The ideal that Mann had envisioned held that all students would attend an excellent school of essentially identical standards regardless of where they live or the students themselves were. The economic disparities between communities make that largely unrealistic and uncommon in the United States. In American education, students are assigned to schools based on where they live.

However, if the family has disposable economic resources then they are more likely to choose private education than the lower socioeconomic status families (Buddin, Cordes, & Kirby, 1997). The dual facts that American law requires that children have formal education and that wealthy families can avail themselves of private schools and

still be in compliance creates the school choice "market." Ultimately, this led to political discussions on matters of school choice for all families. The idea of school choice or school vouchers revolves around the idea that school selection should not be something only for the "haves," but all families regardless of income (Hamilton & Wyckoff, 2001).

In this manner, all families would potentially have the option to choose the "quality schools" that perform better. Even though it has been found that public and private schools perform at largely the same level (Witte, 2002), the differences in performance are largely based on characteristics of the students themselves and their background (DiMaggio, 1982). In other words the treatment effects of the school upon the students are largely more attributable to their own characteristics as opposed to the private school itself (Figlio & Stone, 1997). The wealthy students have much in their favor to help them not only have access to private schools in terms of affordability, but also their competiveness to be admitted to a private school. Furthermore, when the student of a wealthy family does not get admitted to a selective private school, the parents will sometimes resort to bribery (The Economist, 2008).

Behavior like this, begs the question whether the wealthy would bother with formal education at all if given the choice. Perhaps if schooling was not a legal necessity, wealthy parents would simply keep their children at home and raise them with a high degree of investments and nepotism to keep the offspring of the parents of the same economic class without attending school. However, because they cannot do that (Long & Toma, 1988), the wealthy care quite deeply about where their children attend school (Wrinkle, Stewart, & Polinard, 1999).

Motivations of affluent parents. First and foremost, independent K-12 education is, in many ways, a luxury good. After all, parents already pay for public education with their tax dollars, so paying the often five-figure annual tuition costs is a sacrifice. However, many independent school parents are known to say that independent education is an "investment," (Eisenstock, 2006). Indeed, the education and advancement of their offspring is discussed by parents in much the same way as their stock portfolio.

It has been a topic of debate since the advent of independent schools as to whether or not they truly are "better" than public schools. By "better" parents, students, and educators alike are referring to objective measures of student success such as standardized test scores, college attendance, and level of disciplinary infractions (Eisenstock, 2006). However, most studies on this subject often do not account for the selection bias of the families studied because in order to study the treatment effects of public vs. private schooling, researchers must account for who the families are sociologically so as to focus on the schools themselves (Figlio & Stone, 1997).

In one study that went to great lengths to resolve these validity concerns with quantitative data, many conclusions were reached. First, a given family is more likely to seek out independent schooling for any or all of the following factors: metropolitan crime rate, high amount of public schools in the area, higher population of a race different than that of the family (especially for Caucasian families), high parental education, and lastly if there are independent schools that use religious instruction in line with the family's faith. Moreover, parents may like the opportunities available for participation in extracurricular activities and stronger discipline policies administered at independent schools. All of these data demonstrate that parents who send their children to independent

schools are highly influenced by the community demographics in which they live in addition to the unique benefits of attending an independent school (Figlio & Stone, 1997).

High-income parents tend to want exactly what any parent wants: what is best for their child (Hwang, 2005). When money is plentiful, parents will gladly spend it towards providing a promising future for their child (Long & Toma, 1988). In fact, in the early twentieth century when many independent schools had the heavily insulated and largely recognized purpose of being exclusive to only certain families (e.g. Caucasian and affluent), the desire to increase academic quality was only possible by offering scholarships to the middle class (Powell, 1999). Conveniently for all involved desiring to keep the status quo of exclusivity, while simultaneously increasing academic quality, the middle class largely shared the same "values," (e.g. anxiety of other ethnicities, religions, and cultures) (Powell, 1999). In other words, the independent schools could diversify the socioeconomic classes of the students while maintaining the largely homogenous other characteristics such as race and religion.

Ironically, but perhaps naturally, non-Caucasian students are largely disinterested in attending a school with wealthy Caucasian students (Schuster, 2009). In fact, when the Westminster School in Atlanta, Georgia took the rather progressive step of welcoming all students regardless of race in 1965, no African-American students wanted to attend (Powell, 1999).

The first goal of parents seeking to send their child to independent school is to get the child admitted. With funds being plentiful, many parents will spend significant amounts on test preparation (Achen, 2003). The most important test in American

independent school admission is the Independent School Entrance Exam or ISEE (Lohr, 2000). This relates quite well to the work of Pierre Bourdieu and his theories of how capital can be exchanged from one form to another (Bourdieu, 1977). Parents are using economic capital in exchange for cultural capital (test preparation services) to gain access into an independent school for their child. The child then receives the social and cultural capital of attending school there (Knauft, 1996).

Sometimes the student "does not test well," which is a common statement uttered by parents when their child does not perform to their satisfaction (and the satisfaction of the independent school admissions officers). This will then lead to desperate, even unethical attempts to still have their finances play a role in getting their child admitted. This includes when parents try to "buy" their way into independent schools (The Economist, 2008). Yet it is quite arguable that these parents are acting no differently than any other parents; they just have more financial assets to provide for their students. These are parents with resources who will use resources to do what they deem is "best" for the child (Lohr, 2000).

Interestingly, the vague concept of what is "best" for the student is an amorphous ideal. What parents cite as reasons for attending a private school are often such platitudes that are hard to dispute, but vague nonetheless; the private school is "good, prestigious, or exclusive," or a dogmatic phrase such as "[the private school] has a 'student-centered' philosophy" (Cookson & Persell, 1985). However, it has been found that most private school parents are sending their children to a given institution because of either a desire for religious instruction and/or racial homogeneity (Wrinkle, Stewart, & Polinard, 1999). Moreover, white families tend to avoid minority-majority schools and the wealthy avoid

schools with high poverty rates (Saporito, 2003). In essence, the wealthy Caucasian families will claim, and almost certainly with all sincerity, that they are choosing a school for a lofty, educational reason, yet there is little substance to their assertions. Rephrased, they will tout the perceived benefits of a school, much like the admissions office would, yet their motivations really revolve more around the reality that they want their child around similar (wealthy and/or Caucasian) children (Saporito, 2003).

The school choice debate appears in the public sector as well. The idea of school vouchers gives all socioeconomic classes "school choice;" something the wealthy already enjoy (Abdulkadiroglu & Sonmez, 2003). School choice vouchers would eliminate the geographic constraints, not to mention governmentally determined geographic school district constraints, that keep similar students from similar backgrounds in classrooms that are largely homogenous. Inter and intra district choices for all families would not only disassemble the idea of school attendance by geography, but would also destroy the ideals of Horace Mann for equality among the schools (Abdulkadiroglu & Sonmez, 2003).

Students who attend private schools tend to perform better on standardized tests and are more likely to attend college, and thus the desire and promotion of private schools as the panacea to the perennial problems in education is evident (Copeland, 2009). However, there is a likely self-selection of who desires to attend private school and these families already enjoy many advantages in their academic ability (Figlio & Stone, 1997). The school itself is unlikely to be the reason for high academic success. The students are high achieving to begin with, not after they enroll (Figlio & Stone, 1997).

This is not to suggest that the effect that a school has on student learning should be minimized, but rather it should be better interpreted. For example, private schools are far more strict on disciplinary infractions than public schools (Figlio & Stone, 1997). Not only does this create a culture of academic honesty and performance, but also removes students who are likely to cause problems. The disappearance of these students helps to increase the objective measures of performance. Additionally, private school students engage in more extracurricular activities than their public school counterparts (Figlio & Stone, 1997).

Admissions Practices at Independent Schools

The notion of applying to Independent schools as a "full-time job." The demand for independent schools has grown over the last century (Shuster, 2009). This demand has gotten so large that the competition for admission has increased dramatically and even started as early as pre-school (Eisenstock, 2006). Fellow researchers have noted the lack of consistency within admissions processes at independent schools and little research about them (Shuster, 2009). The two main facts that independent school admission is fiercely competitive and largely misunderstood by parents and students has created cottage industries of how-to-get-in guidebooks and even expensive independent educational consultants (Lohr, 2000).

These realities are rather new and challenging to the families who have historically been accustomed to having almost automatic access to independent schools. Throughout much of the earlier twentieth century, parents had to do little more than talk to the Headmaster for their child to be admitted as they were essentially exclusive pedagogical clubs (Cookson & Persell, 1985). Furthering this notion of a "network of the

affluent" was the fact that many independent college preparatory schools had informal or even formal ties to elite higher education institutions; a relationship whose closeness has greatly diminished in modern times, but is still touted on independent school literature today (Shuster, 2009).

The wealthy parents do not enjoy the essentially open landscape of admission to independent schools (and universities) as they once did. However, this still tends to be a very well-resourced, savvy group. These families are the ones who often hire independent consultants and pour over books of admissions tips because they have not only the virtually universal desire of parents to provide their child with every resource, but importantly the economic means and desire to follow through. In fact, applying for independent school has been referred to, quite convincingly, as "a full time job," (Cobb, 1996).

These parents will not only try to learn as much as they can about the admissions process at independent schools, but they will also tap into networks of like-minded and like-financed parents for advice. The "network of the affluent" that used to be little more than a simple conversation with the Headmaster for admission is still very much part of the admissions process, but has simply evolved (Cookson & Persell, 1985). Most parents aspire to play by the rules and go through the admissions process ethically and tastefully. However, if and when this does not result in admission, they will resort to bad behavior such as name dropping influential people, bending application rules, or even bribery (Podmolik, 2002). Of note, and not surprisingly, when the wealthy are not admitted in spite of the large socioeconomic advantages they possess, they use these same advantages in other ways in the hopes of securing an offer of admission. When the social, economic,

and cultural capital fail in gaining admission through the application process, they could use all of their forms of "capital" in different, new ways in the hopes of admission with ethics being a secondary concern (Knauft, 1996). One of the largest explanations for this behavior stems from the fact that families place high value (and often emotion) on their desire to attend an institution based on who else attends (Walton, 2008).

The Admissions Process. Many an admissions officer is quick to explain that the practice of admissions is both "art & science," (Rivera, 2007). While every process is different, there is almost always overlap in what is assessed by the admissions committee. One study that sampled over 150 independent schools admissions offices found that the most common considerations, and often the most important in many processes, were: transcript, standardized testing, letters of recommendation, and interviews (Shuster 2009). Much like the independent schools themselves, there is no "one size fits all approach when it comes to their admissions practices either. However, there are large areas of consensus as to how to evaluate applications and the criteria therein.

Just like private colleges and universities, independent school admissions' main charge is to meet institutional goals. While these vary slightly between institutions, it would be fair to assume that independent schools want academic excellence, talent in extracurricular activities including everything from athletics to performing arts, sociological diversity, and financial capital to stay solvent all from students who possess one or more of these characteristics. The reason any student is admitted within an admissions process revolves around the fact that some thing or many things about a student helps to meet institutional goals (Walton, 2008).

The role of a student's legacy status is often debated in the field of education. The most common arguments against revolve around the notion that legacy status gives preference to students who already enjoy other advantages within the applicant pool (e.g. high academic performance). However, one study found a .10 positive correlation with legacy status and higher grades (Cabrera, 2006). While correlation does not mean causation, these research findings give proponents of legacy preferences an academic argument.

One comprehensive study found that smaller elite independent schools, much like the Gulf School, place a stronger emphasis on students with a special extra-curricular talent, legacy status, having siblings in attendance already, and/or racial diversity (Shuster, 2009). (These attributes are what many in admissions refer to as "hooks" (Eisenstock, 2006)). It follows that smaller ultra-selective independent schools would highlight these considerations in their admissions process because it helps them make admissions decisions when all academic data are more or less equal.

sSocialization: The Transition from Middle to High School

The many changes of adolescence. Students entering high school from middle school are experiencing much change with adolescence, maturation, and academic aspirations. The students often experience anxiety during this transition, and administrative support for all students has been found to be particularly important in acclimating the students to their new environment (Elias, Gara, & Ubriaco, 2010). Since this doctoral thesis focuses on students' academic and extracurricular performance after this transition, understanding how a student acculturates themselves to their new environment is necessary.

Adolescent Development and Enculturation. In the transition from middle to high school, many sociological characteristics will affect how a student adapts to their new environment. Race, gender, and socioeconomic status all need to be considered in examining this transition. Research has shown that male and female students develop differently in terms of their aspirations; male students get more extrinsic aspirations and female students get more intrinsic (Beutler, 2008). Additionally, students feel more positive about the transition than their parents do (Butts, 2012). This transition is even easier when students have programs that help with the change such as orientation nights (Butts, 2012). Research shows that the more a student understands about their educational environment, the more likely the student is to achieve academically and socially (Thuen & Bru, 2009). Additionally, the more a student achieves, the less likely the student is to incur disciplinary infractions (McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008). Thus, there is strong agreement amongst educational researchers that it is a vital for school administrations to make all of their students feel welcome within a new school environment.

Adolescent students yearn to feel as though they belong amongst their peers (Baty, Sorensen, Pancini, & Pasier, 2000). When most students were younger, they tended to seek approval or advice primarily from their parents (Walsh, 2004). As they progress through adolescence, the students will start to seek out more approval from their peer group (Walsh, 2004). In fact, adolescence is often a time when student experiment with different identities and group affiliations; yet the two "primary socialization domains remain parents and peers (Barber & Olson, 1997). Considering that adolescents will often have daily schedules that will have them interacting with their parents and their

peers on a highly consistent basis (with home and school being two places an adolescent will spend a large portion of his or her time) it follows that parents and peers will each play a role in shaping an individual student's identity and subsequent behavior (Walsh, 2004).

However, much is occurring biologically and psychologically within the body and mind of an adolescent as they progress from childhood to adulthood (Studsrod & Bru, 2012). Students thus have to contend with both the strong and relatively fast occurring biological changes along with trying to balance the demands, challenges, opportunities, and temptations of the social landscape of which they are a part (Walsh, 2004). They are not "children," yet certainly are not adults. Thus, they yearn for freedom and responsibility, but yet with so much going on internally, they have not mastered how to approach many situations in the adult world with any significant acumen (Youngblade & Curry, 2007).

Most researchers agree that students require structure: rules, expectations, and follow-through from parents, as well as other adult authority figures all help students better learn how to act in society; yet this must be a balanced approach. (Walsh, 2004). Too much or too little structure is not recommend in dealing with adolescents as it sends them mixed messages (Thuen & Bru, 2009).

When educators think about all of these factors affecting adolescent development, it remains crucial that they think about how best to acclimate students to the school community. As school goes from the elementary to middle to secondary levels, the expectations for students naturally increases with the difficulty of the academic material along with the idea that students act more autonomously. Consequently, students will

have to adjust to the fact that their teachers will likely do less for them as a high school student than what their teachers did for them as a middle school student (Barber & Olson, 2004).

One study found that as student's perceived a decrease level in teacher involvement it did significantly affect changes in levels of a student's academic, personal, and interpersonal functioning (Barber & Olson, 2004). Perhaps the natural progression of Kindergarten through grade 12 education, combined with the relatively rapid changes in adolescent biological and psychological development, create many of the feelings students report of teacher involvement and the consequent changes in their own achievement.

This suggests that educators need to address such issues proactively. One study found that "healthy adolescent development" is fostered in part to having access to resources that help nurture personal success (academic or otherwise) and adults who supported these aspirations (Youngblade & Curry, 2007). Student involvement in extracurricular activities has shown positive benefits for both males and females, and tends to correlate with increased academic performance (Walsh, 2004). However, there needs to be a balance between extracurricular activities and academics as too much of one area will certainly affect the how students perform in another. After all, academic success requires studying and success in extracurricular activities requires practice, and yet both require time (Walsh, 2004).

In the life of a school community, a student's day is largely comprised of academic classwork and extracurricular activities that account for that student's learning environment. One study found that the higher the students' perceptions of their learning

environment, the less likely the occurrence of behavioral and/or emotional problems (Thuen & Bru, 2009). In fact, another study echoed these findings, when it concluded that academic support by teachers was one of the highest variables for having positive treatment effects for excelling academically and pursuing education (Studsrod & Bru, 2012). Yet, another study also supported the need for adult support and structure finding that when academics were high, student disciplinary infractions decreased (McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008). The research thus strongly suggests that adolescents need a fair, structured environment in order to achieve academic and personal success.

These are important considerations for independent school practitioners. In many independent schools, the student body will largely share at least one major sociological characteristic, including, but not limited to: gender, race, religion, academic ability, extracurricular talent, and socioeconomic status. A students need to "fit in" not only helps them adjust emotionally and personally, but also is the "most consistent predictor of grades over time" (Wentzel & Caldwell, 1997). In fact, one study found that the need of 6th grade students to feel supported by their peers and parents correlated positively with receiving higher grades one year later (Wentzel, 1998). This sense of belonging should be of concern for administrators because of the strong effects on academic performance and presumably sense of self-worth. When administrators approach this problem effectively, it can help students adjust to their environment (McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008). The best methods for achieving this have a core philosophy of how to best make students feel supported by faculty and peers along with individual interactions between faculty and students (Wentzel, 1997). In a study that measured a

social skills program for middle school students, the measured effects suggest that such a program would have positive effects on the social skills of a student (Baty, 2000). Yet another study also found that teaching cooperation skills yielded an increase in their usage by students in an elementary school (DuBois, Endsley, & West, 1999).

All of these findings underscore the need for administrators to place programming to help students acclimate to their school environment and foster social bonds amongst each other. Therefore, this programming must be holistic in training students to navigate a school environment in and out of the classroom. Another similar study that examined teaching social skills to middle school students (grades 6-8) for classroom usage, found that while the students' usage of these skills increased in the classroom, there was little noticeable change in students employing these social skills in non-classroom situations on campus (Getz, LaBahn, & Regan, 1999).

Wealthy and famous students. Socioeconomic status is often regarded as having a marked impact on student achievement (Figlio & Stone, 1997). However, one study that controlled for ability found that it was not necessarily socioeconomic status of having money, but rather the passion of cultural capital as described by Bourdieu (DiMaggio, 1982). Teachers tend to interact with students who possess a high level of culture capital, and thus receive more attention than those who have less (Bourdieu, 1977). These findings strongly suggest that the money itself (financial capital) creates the preconditions of acquiring cultural and social capital and it is only in the latter forms of capital that allowed benefits of student performance occur (Bourdieu, 1977).

One of the ways in which student peer groups are formed involves participation in extracurricular activities. Participation in these groups creates an "informal" status

system and the higher the level of involvement, the more the student feels that they are part of the school (Ziblatt, 1965). Not surprisingly, the higher profile activities that create the high school student equivalent of a celebrity (e.g. student leadership roles and athletics) will tend to create the popular crowd amongst the student body (Kinney, 1993). These students often have an easier time adjusting to the school community socially because of their many friendships and the esteem given upon them by their peers (Kinney, 1993).

The selection "process" that occurs both formally through school mandated enterprises such as student government elections and informally through student affinities for each other create a social hierarchy of student social circles (Kinney, 1993). The informal vetting of students choosing their friends is very much based on students picking people like themselves with whom to associate (Kandel, 1978).

All of this can hamper the development, academics, and emotional well-being of the students who are not among the popular crowd (Ziblatt, 1965). This has been found to be more of factor for students from the working class who may perceive equality of opportunity consciously, but actually see that the system is comprised of status by association (Ziblatt, 1965). With consideration to the fact that a working class student perceives the system as not "what you know, but who you know," the everlasting effects on them in school and ultimately life in the "real world" could be quite profound. Thus, Bourdieu's theories about capital and exchanges of it from one form to another are experienced and recognized by the working class students (Knauft, 1996).

College: The next admissions process. College aspirations are particularly interesting in that the school culture will affect students at that high school. The more "prestigious" the high school, the stronger the college going culture, and the more pressure on all students to enjoy "success" in their college search (Meyer, 1970). Just like the reasons espoused by parents as to why they send their children to independent schools, the college search process involves noble sounding platitudes offered by parents and students about why they wish to attend a particular higher education institution (Cabrera, 2006). However, "reputation" and "prestige" based on little more than popular held beliefs that a given institution is a "good" school often remains the main reason (Eisenstock, 2006). Given that those who attend independent school are prestige-conscious educational consumers, it follows that students are trying to meet the high expectations of their parents and by gaining admission to a selective college are doing so (Parsons, Adler, & Kaczala, 1982).

When other students are achieving, it puts pressure on students to achieve more regardless of background. However, the students with more means will have significant advantages over their lower income classmates (Galusha, 2010). In fact, the high status of a school simultaneously raises the level of college aspiration for the able students and negatively impacts the desire of the students who are less able (Meyer, 1970). One recent neuroscience study at Temple University found that the reward centers in the brain of an adolescent reacted more strongly when they knew another teenager was watching them complete a high risk driving simulation while inside an fMRI machine (Gopnik, 2012). The conclusions from these findings suggest that the level of achievement within a high school community have tremendous effects on the level of anxiety felt by students; all of

which can be traced back to parental expectations as well as the students themselves. The constant competition to be admitted to independent school repeats itself within the college search process, too.

While student success for one student does not necessarily create student success for others, student success does create a culture that places tremendous emphasis on the expectation of achievement (Meyer, 1970). This leads high achieving students to aspire even higher while simultaneously lowering the aspiration of the low achieving students (Meyer, 1970). A study on college aspiration at an elite independent school concluded that the high achieving privileged students have been essentially groomed from an early age to value education more than their less privileged peers (Hughes, 2008). The ambitions of the parents and students emanate from themselves are exasperated by their peers who hold many of the same desires and goals. Moreover, the aspiration towards a specific career was determined to be correlated with a parent discussing with their child their desire that the child becomes, for example, a physician. Interestingly, a stronger positive treatment effect on the student's career goals was found to not necessarily be the career held by the parent itself, but rather the parent merely discussing their desired career for the child (Lentz & Laband, 1989). Yet, the parent having the career almost certainly helps their ability to speak to it with authority (Lentz & Laband, 1989).

For all of these reasons, the daily life of an independent school student is perhaps that of an intensified adolescence. Independent school middle and high school students are adolescents, just like their public school peers. However, they tend to be environments where "fitting in" is not merely what any adolescent faces in a school community, but additionally, because of the benefits, privileges, and even liabilities of

having high levels of what Bourdieu would call “social, cultural, and economic capital,” the expectations of their parents and peers is all that much greater (Bourdieu, 1977; Walsh, 2004). In fact, alumni of “prestigious” independent schools rarely reflect on a teacher or a given academic course, but rather the students with whom they attended school with (Cookson & Hodges, 1985). This suggests that the normal pressure of a secondary school environment is all the more intensified when high levels of Bourdieu’s forms of capital are introduced into the equation (Bourdieu 1977).

Chapter 3
Methodology

In order to answer the research questions, data on the academic and extracurricular performance of students at the Gulf School were required. The necessary data were comprised of the institutional records recorded by the Gulf School regarding the 9th and 10th grade academic and extracurricular performances of the graduating classes of 2013 and 2014. Then, comparisons in performance between the "lifer" students and the "first timer" students as well as between genders were made and conclusions were drawn.

Description of the Research Design

The data needed to answer the academic questions, which were solely based on end of year grade point averages for 9th and 10th grade [E.O.Y. G.P.As], were simple to organize and analyze as it was merely two numbers previously recorded from the academic office for each student. To further explain these numbers: the Gulf School utilizes a 100 point grading scale. There is a cultural understanding amongst the administration, faculty, students, and parents that no student ever receives a "100" for a course, but high "90s" grades are not unheard of. The weighting given to a student's end-of-year and/or cumulative grade point average is as follows: .04 is added to the mean of all academic courses completed by a student in a given year for each Advanced Course and .06 is added to the mean of all academic courses completed by a student in a given year for each Honors or Advance Placement [AP] Course.

However, the curriculum structure of the Gulf School, which does not offer students the option of many Honors or Advanced Placement courses as freshmen [9th

grade] or sophomore [10th grade] students. The rationale for this, from the Gulf School administration, is to let students get adjusted to the rigor of the upper school and not to overwhelm them. Consequently, few students researched in the study will have many weighted courses. Yet, there are a few high academically achieving students who may have such high grades and enough weighted courses that their cumulative grade point average for a given year is actually over 100 points.

In contrast, the extracurricular score was far more subjective. A point value was assigned for each student given their involvement in particular components of extracurricular life. The three components that were considered were: in-school clubs, athletics, and community service.

Table 3.1 illustrates how points were assigned to each student for each activity.

Table 3.1

Extracurricular Score Point Breakdown by Activity and Involvement

	Areas of Extracurricular Involvement			
Points Earned	Student Clubs (Minor)	Student Clubs (Major)	Athletics	Community Service
1	Membership	Not used in study	Not used in study	At least 20 hours of community service
2	Leadership role	Membership	Member of junior varsity team	At least 50 hours of community service
3	Not used in study	Leadership role	Member of varsity team	Over 100 hours of community service
4	Not used in study	Outstanding leader*	Outstanding varsity athlete*	Over 200 hours of community service*

*Rarely used in study

For school clubs, clubs were either considered “minor clubs,” or “major clubs.” The main difference between the two clubs consisted of the level of visibility within a

school community. For example, a language club might meet once a week in a small group and not have much regular interaction as a club entity within the school community and was thus considered a "minor" club. However, an activity such as the student newspaper, which is broadly visible to the school community, was considered to be a major club. Minor clubs were affinity groups, language, science, and art clubs. Yearbook, the student newspaper, and student government as well as the major performing arts clubs or student theatrical productions were considered major clubs. Essentially, a club being considered "minor" or "major" comes down largely to visibility and exposure on campus. Students received points added to their overall extracurricular score based on what their role was in a given club and how many clubs they were in receiving a point or points for each club in accordance with their assigned role.

For athletics, because it tends to be a rather time consuming activity with daily practices, road trips to away games, and the high level of exposure, the lowest point value a student could get was a "2" for being a member of a junior varsity team. There were a few cases where the students being studied were members of varsity teams, meaning that they were on an upperclassmen athletic roster as 9^{th} or 10^{th} graders. These students received a "3" for their involvement as that shows strong extracurricular talent, to say nothing of the confidence needed to be on a team traditionally for older students. In a few cases, a student was on a varsity team and was known to be an incredible asset to the team due to his or her talent and/or leadership. In these rare cases, these student's received a "4."

Lastly, a score was calculated for community service (which is tracked by "hours" at the Gulf School). Most students did a handful of hours, but students had to complete at

least 20 in a year to get a minimum community service extracurricular point score of a "1." Students then got "2," "3," or (in a few cases) a "4" if they had completed at least 40 hours, at least 100 hours, or at least 200 hours respectively.

There exists an important difference between academic and extracurricular data: academic data shown in the study shows 9th grade and 10th grade averages for each year, whereas the extracurricular score is cumulative for both 9th and 10th grade years. The argument for this goes as follows: extracurricular involvement tends to increase amongst students as high school progresses. To look at a breakdown of both grades for extracurricular data is perhaps far too nuanced and not as telling as what a student completed in total after two years. Academic data, being merely a grade point average based on grades and classes was far easier to break down and offer a telling piece of data for an entire year of school. Moreover, students have to go to class, but they do not have to participate in extracurricular activities. This is the reason for the difference in analysis between academic and extracurricular activity data.

Table 3.2

Study's Research Questions

Research Question	Data Source	Collection Procedure	Data Analysis
1) Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
2) Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder	Admissions data and student records	Requested from appropriate campus departments	Frequencies and Percentages

middle school?		and divisions	
3) Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
4) Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages

Setting

The Gulf School is Kindergarten-12th grade independent day school. It is located in an affluent suburb within a major city located in a state within the Southwestern United States. The school was founded in the middle of the twentieth century and currently occupies a space of approximately 30 acres. There are approximately a dozen main buildings that comprise the campus which are 1 to 5 stories tall. While the Gulf School is officially secular in its mission, the school community does convene weekly for a non-denominational Judeo-Christian Chapel service.

The total enrollment of the Gulf School stands at approximately 1,200 students total with a faculty of approximately 150. There are approximately 140 students in each grade of the upper school. Tuition costs are approximately $20,000 per academic year, being slightly higher in the middle and upper schools. Approximately 27% of the student body identifies as being of a non-Caucasian background. Approximately 13 % of the student body receives significant financial aid to attend the Gulf School. The admissions

office of the Gulf School strives toward a goal of a student population that reflects the broad diversity of the school's city. The school has a culture that is largely based on the Episcopalian denomination, yet the school remains officially secular.

Moreover, the Gulf School is often thought of as a very elite independent school. There are independent schools in the area, that are similar to the Gulf School, yet few are regarded as highly, (i.e. "prestigious"). Perhaps the reasons for this assessment of public opinion are due to the facts that virtually 100% of students enroll in a four-year college upon graduation, and many of the colleges which students enroll in are among the most selective in the United States or world. Additionally, the school offers many courses to the upper school students that are normally found within higher education such as Organic Chemistry and Multivariable Calculus. These are courses not traditionally found at American high schools and perhaps add to the perception of the Gulf School as an elite independent school.

The community at the Gulf School remains a closely connected one. Students and their families alike often socialize amongst each other both during school hours and afterward. Even with the school's relatively young age, some parents are Gulf School alumni themselves and have chosen to send their children to the Gulf School as well. School traditions last for decades and parents routinely participate in "Parents' night" activities, sporting events, cultural showcases, and the like. The Gulf School also has a robust culture of community service within the upper school. Even though community service is not required for students, approximately 98% of the upper school students have participated in at least a few hours of community service during any academic year during their time in the upper school.

Subjects

The student body of the Gulf School consists of students from all over the metropolitan area of the school's city. For this study, the academic and extracurricular performance of the students during their 9th and 10th grade years at the Gulf School was examined for the graduating classes of 2013 ("Cohort 1") and 2014 ("Cohort 2").

The breakdown of the research subjects is as follows:

Table 3.3

Cohort 1 Frequencies and Percentages by Gender

Gender	*n*	%	Valid %
Males	70	49.6	49.6
Females	71	50.4	50.4
Total	141	100.0	100.0

Note. $N = 141$

Table 3.4

Cohort 1 Frequencies and Percentages by Middle School

Middle School	*n*	%	Valid %
Non-Gulf School	43	30.5	30.5
Gulf School	98	69.5	69.5
Total	141	100.0	100.0

Note. $N = 141$

There are 141 students within Cohort 1 which represents the Gulf School graduating class of 2013. The gender breakdown is essentially equal with 70 males and

71 females. The breakdown by middle school is roughly 2:1 with 98 Gulf School middle school attendees, and 43 non-Gulf School attendees.

Table 3.5

Cohort 1 Frequencies by Middle School and Gender

Gender/Middle School	Non-Gulf School	Gulf School	Total
Male	21	49	70
Female	22	49	71
Total	43	98	141

Note. $N = 141$

With regard to both gender and middle school attended in Cohort 1, there are 21 male students and 22 female students who are "first timer" students at the Gulf School, while there are 49 male students and 49 female students who are "lifer" students at the Gulf School.

Table 3.6

Cohort 2 Frequencies and Percentages by Gender

Gender	*n*	%	Valid %
Males	70	49.6	49.6
Females	71	50.4	50.4
Total	141	100.0	100.0

Note. $N = 141$

Table 3.7

Cohort 2 Frequencies and Percentages by Middle School

Middle School	*n*	%	Valid %
Non-Gulf School	37	26.2	26.2
Gulf School	104	73.8	73.8
Total	141	100.0	100.0

N = 141

There are 141 students within Cohort 2 which represents the Gulf School graduating class of 2014. The gender breakdown is essentially equal with 70 males and 71 females. The breakdown by middle school is roughly 2:1 with 104 Gulf School middle school attendees, and 37 non-Gulf School attendees.

Table 3.8

Frequencies by Middle School and Gender

Gender/Middle School	Non-Gulf School	Gulf School	Total
Male	20	50	70
Female	17	54	71
Total	37	104	141

N = 141

With regard to both gender and middle school attended in Cohort 2, there are 20 male students and 17 female students who are “first timer” students at the Gulf School, while there are 50 male students and 54 female students who are “lifer” students at the Gulf School.

Procedures

Institutional Research Board approval from the University of Houston was sought and granted (Appendix A) for a research study that consisted of archival data from students in the Gulf School's 12th grade graduating classes of 2013 and 2014 representing Cohorts 1 and 2 respectively. Since this was a research study that utilized purely archival data, no permission from students or their parents was required or sought. Upon approval from the Institutional Research Board at the University of Houston, permission to request the archival data was sought and approved by the senior administration of the Gulf School.

After approval was granted to continue the research study, the data needed were requested and obtained from the relevant departments at the Gulf School. Student matriculation data was requested from Admissions regarding which middle school a student attended prior to enrolling in the upper school. Grade point averages were requested from the Academic Office. Extracurricular activity rosters were compiled by data requested from the Dean of Students office in addition to student rosters as printed in the school yearbooks for the academic years of: 2009-2010, 2010-2011, & 2011-2012). Community service "hours served" records were requested from the Community Service Coordinator. Athletic rosters were requested from the Athletic Office.

Once these data were compiled, students were differentiated in a binary system to divide them for data analysis. A spreadsheet for each cohort was created. [Cohort 1's data spreadsheet is Appendix B, and Cohort 2's data spreadsheet is Appendix C]. The student's individual 4 digit ID number was the first column, the student's gender was found in the second column ("M"=Male students & "F"=Female students, but these were

changed to a “0” and “1” respectively to run the data), a “0” and “1” were used in the third column to signify attendance at a non-Gulf School middle school (i.e. a “first timer student”) or the Gulf School (i.e. a “lifer” student) respectively, followed by the 9th grade end of year grade point average in the next column, followed by the 10th grade end of year grade point average in the next column, and lastly the extracurricular score in the last column.

The data from the 9th and 10th grade years for the high school graduating classes of 2013 & 2014 (Cohorts 1 & 2) were analyzed using IBM’s SPSS 20 statistics software to determine the frequencies of occurrence in response to the research questions. The collected data was analyzed and compared using the relevant variables in order to answer each research question.

Chapter 4
Results

The results from the data analysis, along with the relevant research questions, are shown below:

Table 4.1

Cohort 1 Case Processing Summary for Both Genders

		Valid		Missing		Total
		N	%	*N*	%	*N*
End of Year GPA for 9th Grade	0	43	100	0	100	43
	1	98	100	0	100	98
End of Year GPA for 10th Grade	0	43	100	0	100	43
	1	98	100	0	100	98
Extracurricular Score	0	43	100	0	100	43
	1	98	100	0	100	98

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Table 4.2

Cohort 2 Case Processing Summary for Both Genders

		Valid		Missing		Total
		N	%	*N*	%	*N*
End of Year GPA for 9th Grade	0	37	100	0	100	37
	1	104	100	0	100	104
End of Year GPA for 10th Grade	0	37	100	0	100	37
	1	104	100	0	100	104
Extracurricular Score	0	37	100	0	100	37
	1	104	100	0	100	104

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

The tables above show the Case Processing Summary of students by middle school for both Cohorts 1 and 2. In Cohort 1, there were 43 "first timer" students, who did not attend the Gulf School's middle school, and 98 "lifer students, who did attend the Gulf School's middle school. In Cohort 2, there were 37 "first timer" students, who did not attend the Gulf School's middle school, and 104 "lifer" students, who did attend the Gulf School's middle school.

Results of Each Set of Statistics

Question 1: *Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?*

Table 4.3

Cohort 1-9th Grade GPA Data for All Students

	Non-Gulf School	Gulf School
Frequency of Students	43	98
Mean GPA	88.778	88.052
Variance	26.335	26.151
Standard Deviation	5.1318	5.1138
Mininmum	77.0	73.4
Maximum	98.4	96.4
Range	21.4	23.0

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 43 "first-timer" students, who did not attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 88.778, a variance of 26.335, a standard deviation of 5.1318, with a minimum 9th grade end of year grade point average of 77 and a maximum grade point average of 98.4 creating a range of 21.4. The 98 "lifer" students, who did attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 88.052, a variance of 26.151, a standard deviation of 5.1138, with a minimum 9th grade end of year grade point average of 73.4, and a maximum grade point average of 96.4, creating a range of 23.

Figure 4.1

Cohort 1-9th GPA Data for “First-Timer” Students

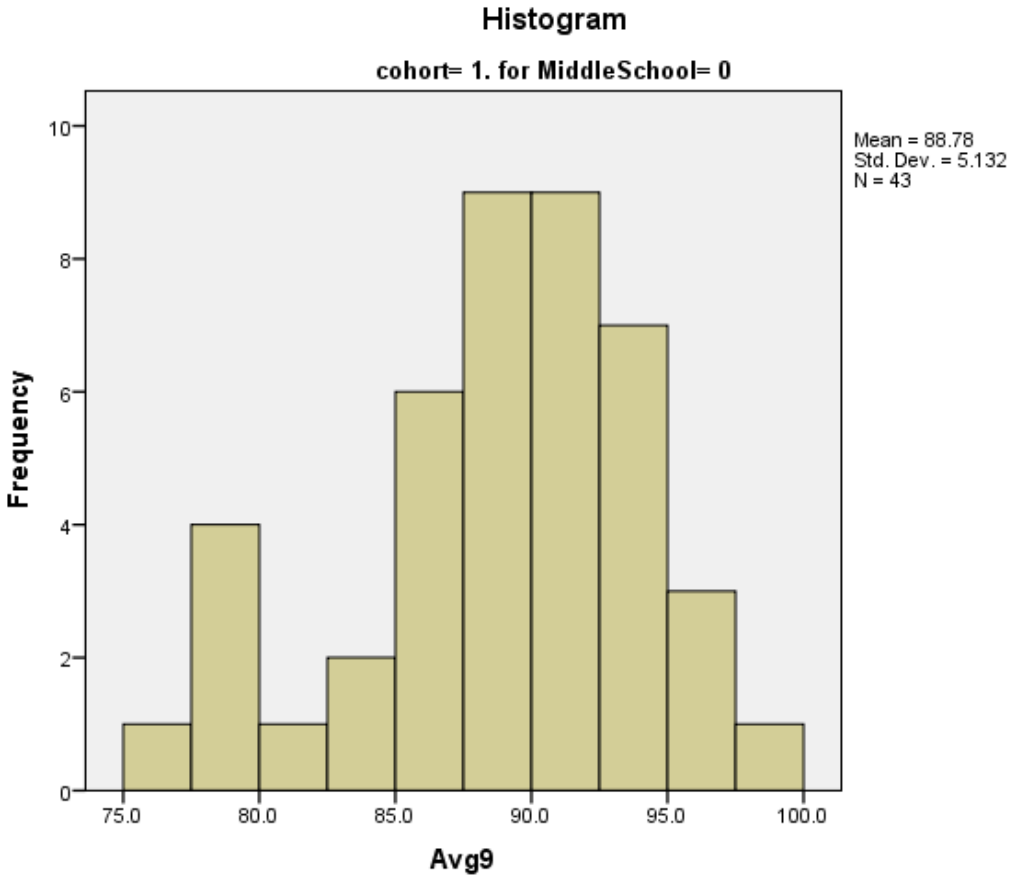

Figure 4.1: This histogram shows the 9th grade end of year grade point average data for Cohort 1’s 43“first timer” students [indicated by the “0” found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95.

Figure 4.2

Cohort 1-9th Grade GPA Data for “Lifer” Students

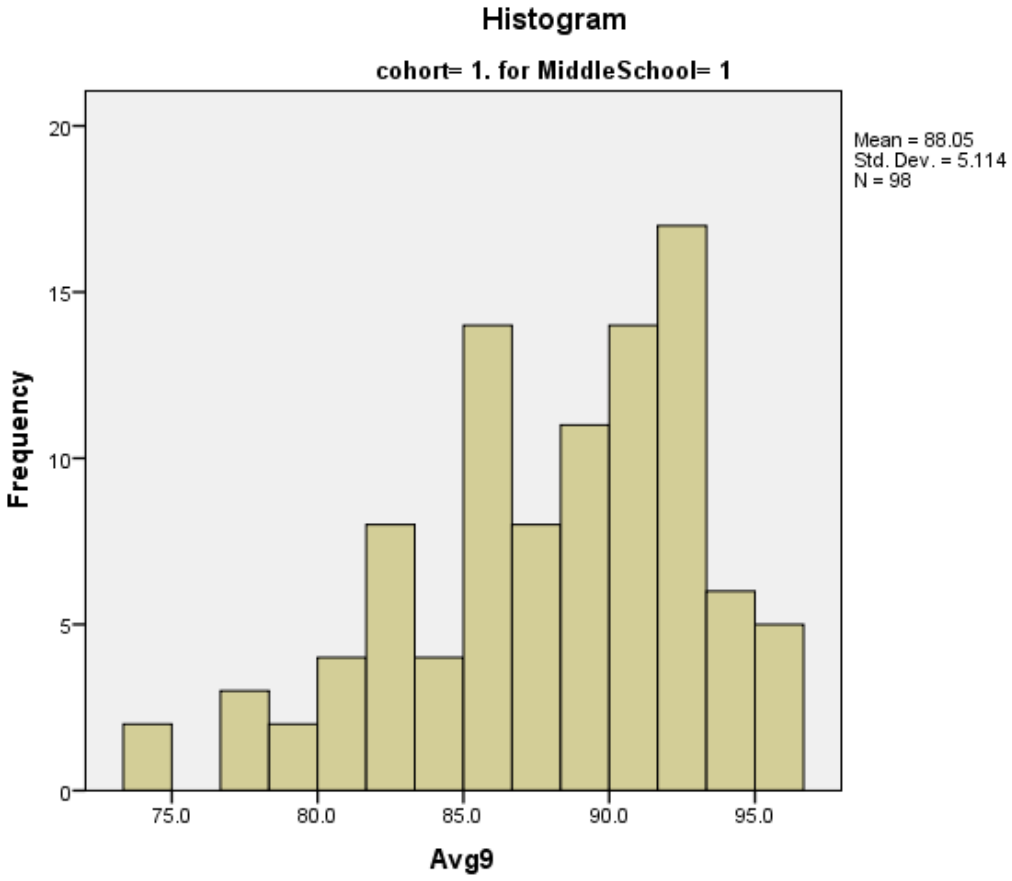

Figure 4.2: This histogram shows the 9th grade end of year grade point average data for Cohort 1’s 98 “lifer” students [indicated by the “1” found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95.

Figure 4.3

Cohort 1-9th Grade GPA Data for “First Timer” and “Lifer” Students

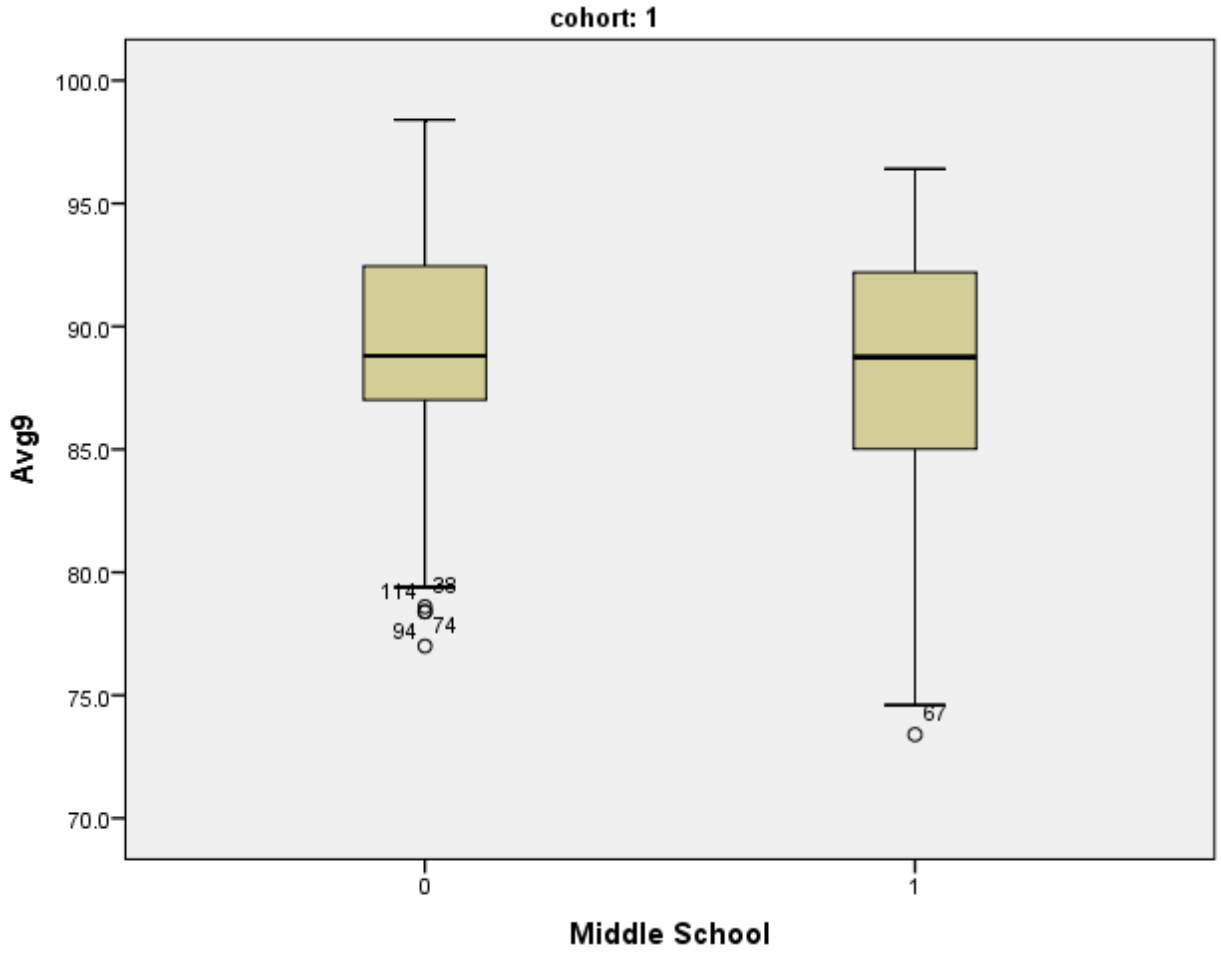

Figure 4.3: This boxplot shows the 9th grade end of year grade point average data for Cohort 1’s 43 “first timer” students as well as the 98 “lifer” students. The Y-axis shows the end of year grade point averages for the students. The X-axis indicates what middle school a student attended by the “0” and “1,” found in the data spreadsheets to indicate non-Gulf School middle school students, and Gulf School middle school students respectively. As the boxplot indicates, most of the students had grade point averages between 85 and 95 but with greater variation amongst the “lifer” students.

Table 4.4

Cohort 1-10th Grade GPA Data for All Students

	Non-Gulf School	Gulf School
Frequency of Students	43	98
Mean GPA	90.168	89.649
Variance	23.486	21.642
Standard Deviation	4.8462	4.652
Mininmum	78.0	75.4
Maximum	98.2	97.0
Range	20.2	21.6

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 43 "first-timer," students who did not attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 90.168, a variance of 23.486, a standard deviation of 4.8462, with a minimum 10th grade end of year grade point average of 78, and a maximum grade point average of 98.2, creating a range of 20.2. The 98 "lifer" students, who did attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 89.649, a variance of 21.642, a standard deviation of 4.652, with a minimum 10th grade end of year grade point average of 75.4, and a maximum grade point average of 97, creating a range of 21.6.

Figure 4.4

Cohort 1-10th Grade GPA Data for "First Timer" Students

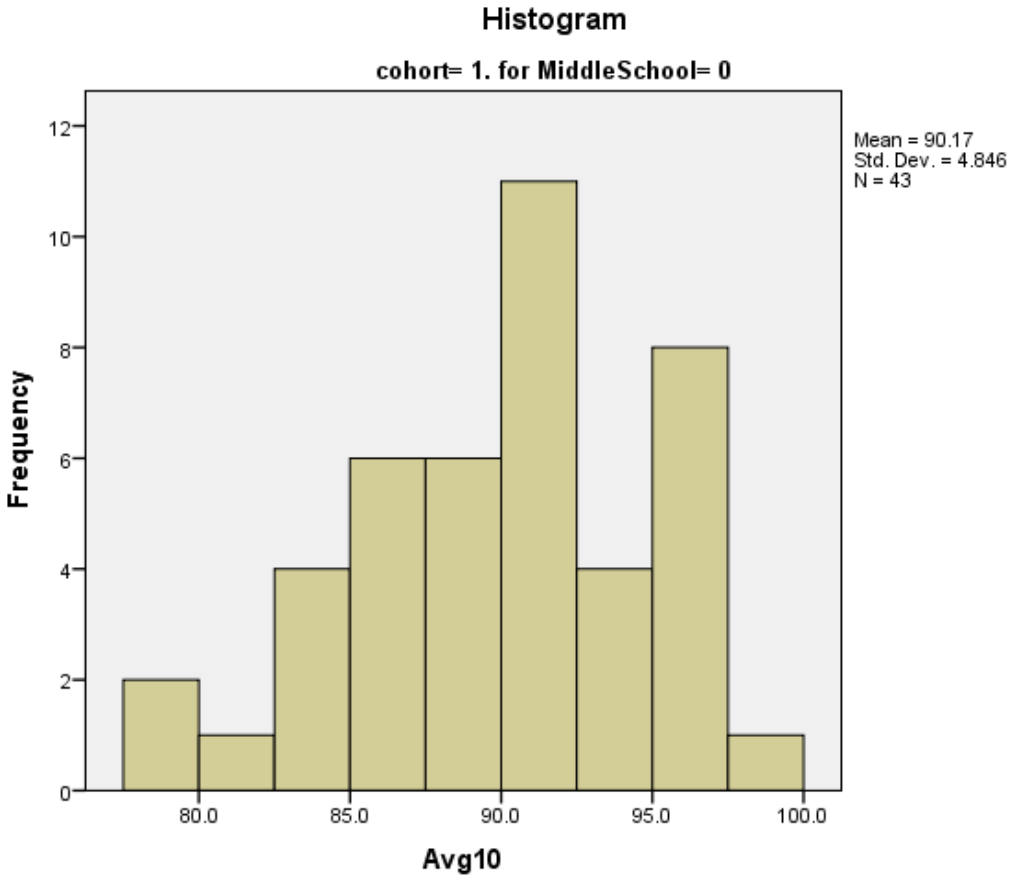

Figure 4.4: This histogram shows the 10th grade end of year grade point average data for Cohort 1's 43 "first timer" students [indicated by the "0" found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95.

Figure 4.5

Cohort 1-10th Grade GPA Data for "Lifer" Students

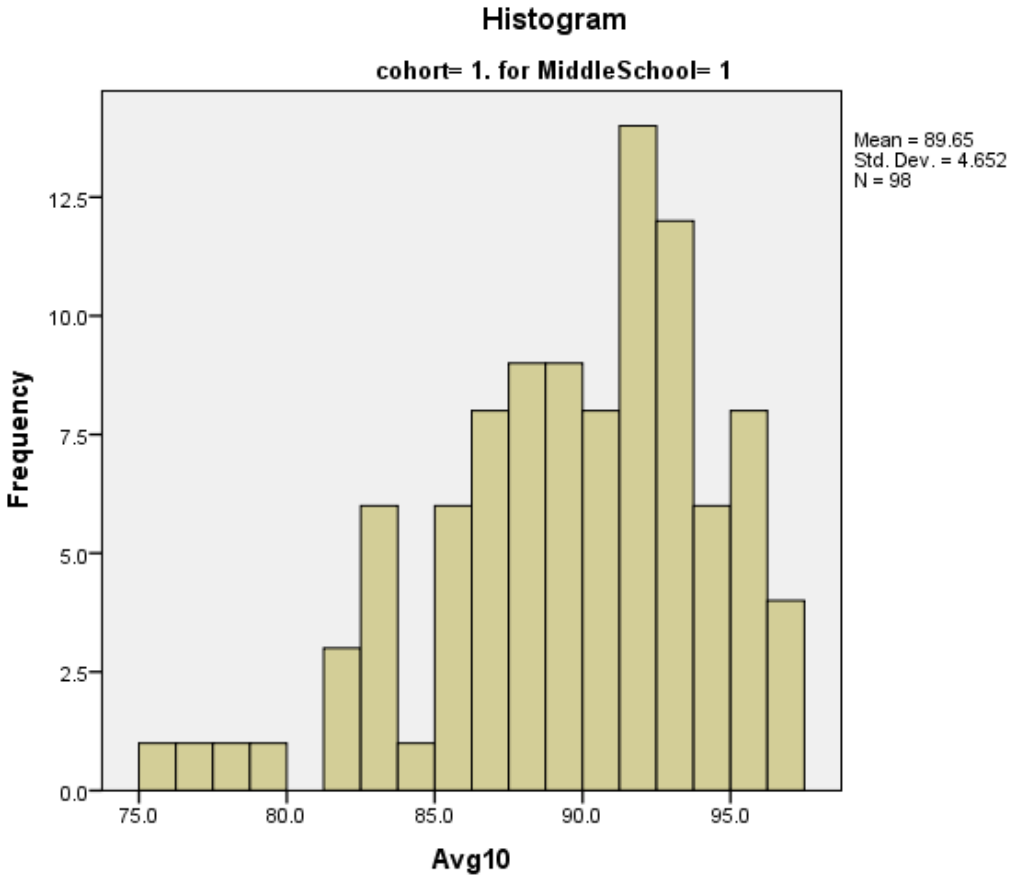

Figure 4.5: This histogram shows the 10th grade end of year grade point average data for Cohort 1's 98 "lifer" students [indicated by the "1" found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95.

Figure 4.6

Cohort 1-10th Grade GPA Data for “First Timer” and “Lifer” Students

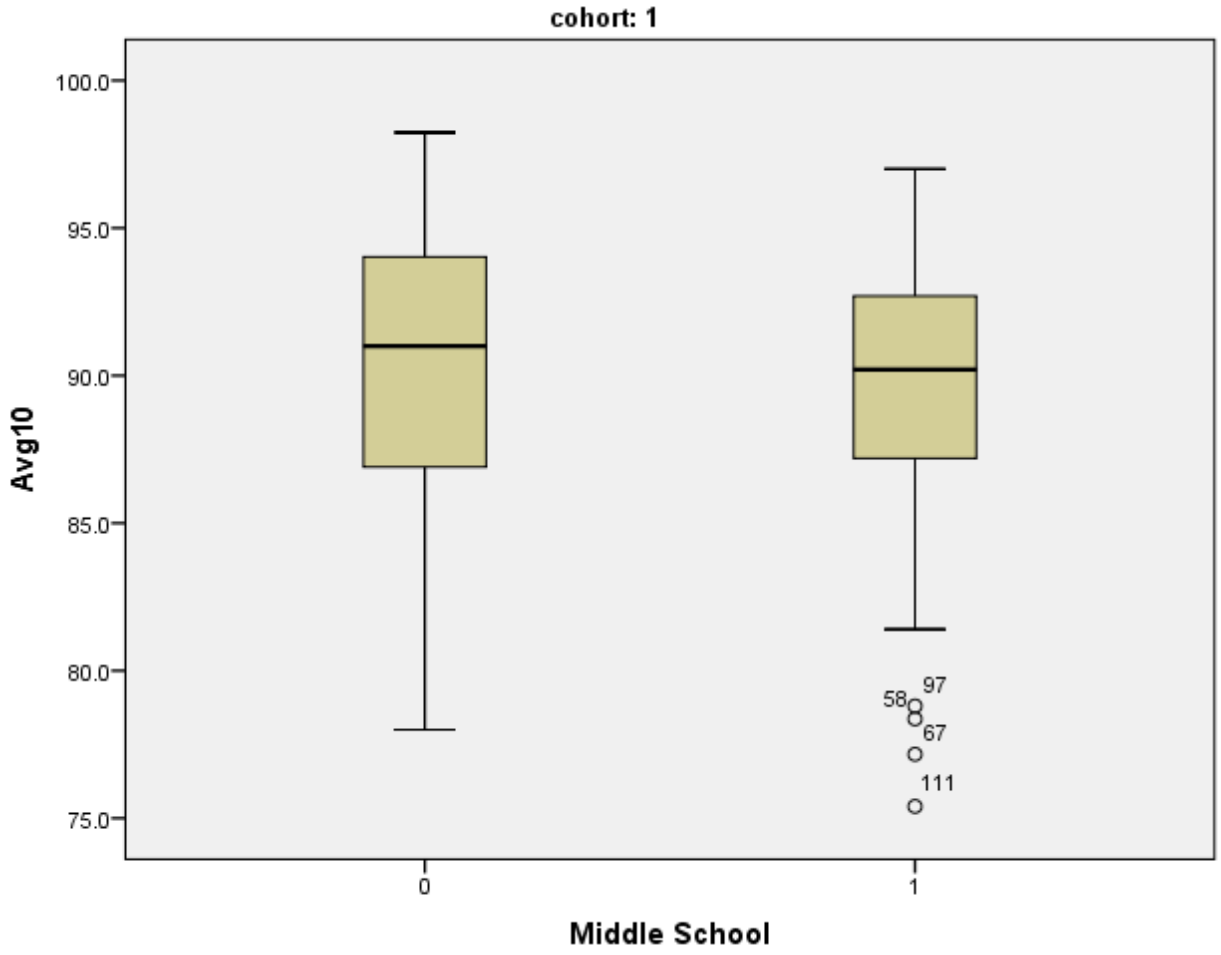

Figure 4.6: This boxplot shows the 10th grade end of year grade point average data for Cohort 1’s 43 “first timer” students, as well as the 98 “lifer” students. The Y-axis shows the end of year of grade point averages for the students. The X-axis indicates what middle school a student attended by the “0” and “1,” found in the data spreadsheets to indicate non-Gulf School middle school students and Gulf School middle school students respectively. As the boxplot indicates, most of the students had grade point averages between 85 and 95, but with greater variation for the “first timer” students.

Table 4.5

Cohort 2-9th Grade GPA Data for All Students

	Non-Gulf School	Gulf School
Frequency of Students	37	104
Mean GPA	90.068	87.505
Variance	16.239	31.34
Standard Deviation	4.0298	5.5995
Mininmum	81.4	73.0
Maximum	99.0	99.2
Range	17.6	26.2

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 37 "first-timer" students, who did not attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 90.068, a variance of 16.239, a standard deviation of 4.0298, with a minimum 9th grade end of year grade point average of 81.4, and a maximum grade point average of 99, creating a range of 17.6. The 104 "lifer" students who did attend the Gulf School's middle school had a mean 10th grade end of year grade point average of 87.505, a variance of 31.34, a standard deviation of 5.5995, with a minimum 10th grade end of year grade point average of 99.2, and a maximum grade point average of 99.2, creating a range of 26.2.

Figure 4.7

Cohort 2-9th Grade GPA Data for "First Timer" Students

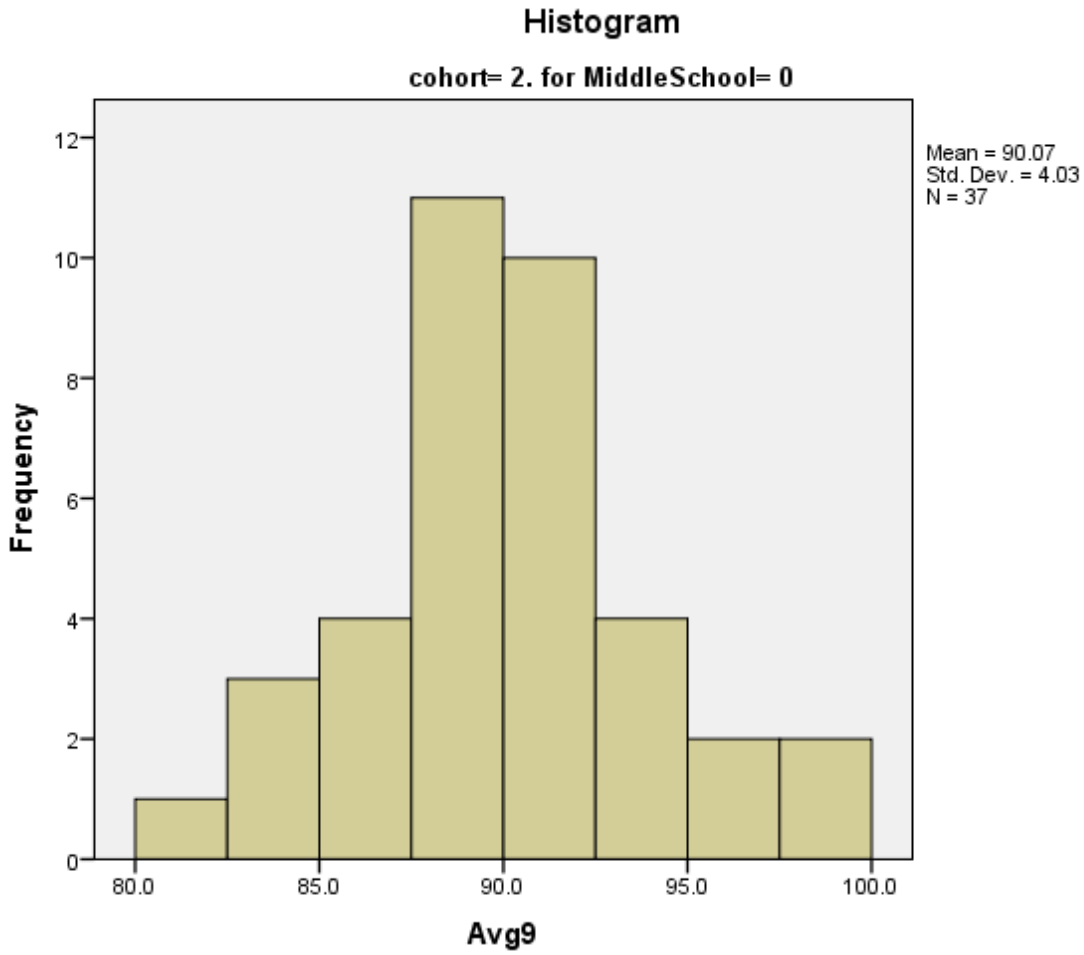

Figure 4.7: This histogram shows the 9th grade end of year grade point average data for Cohort 2's 37 "first timer" students [indicated by the "0" found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year of grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95, with the majority being approximately 87 to 93.

Figure 4.8

Cohort 2-9th Grade GPA Data for "Lifer" Students

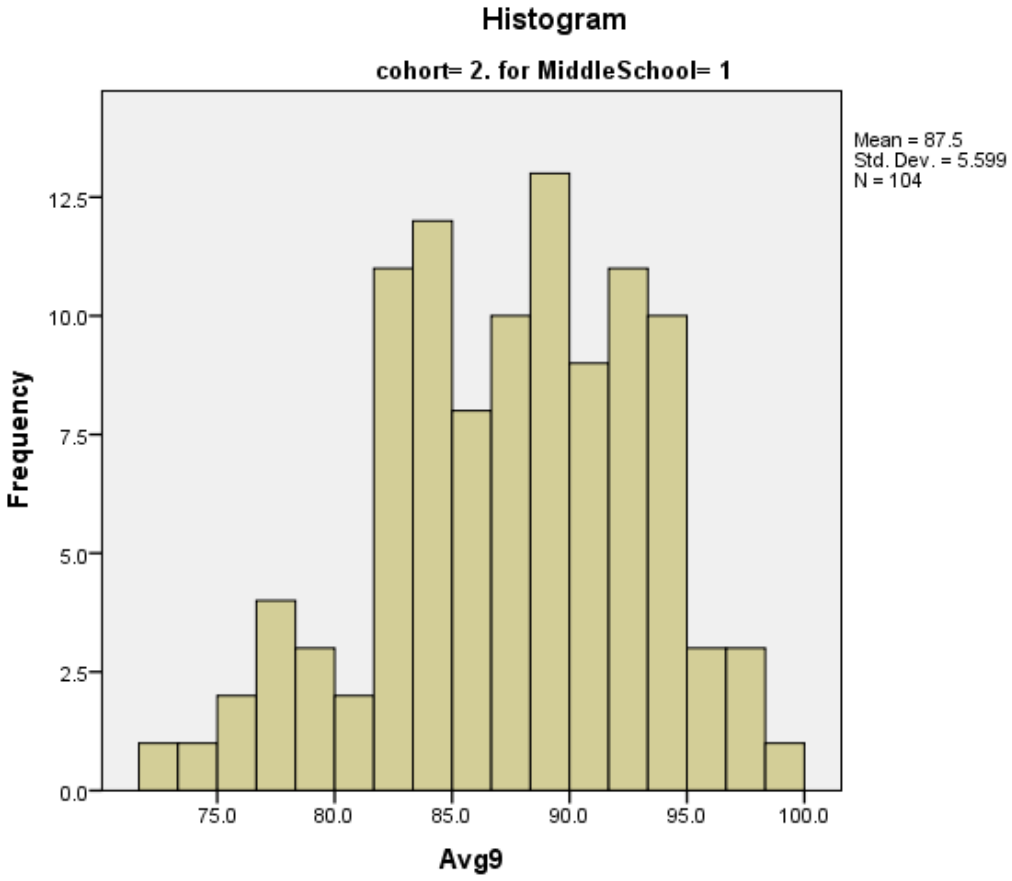

Figure 4.8: This histogram shows the 9th grade end of year grade point average data for Cohort 2's 104 "lifer" students [indicated by the "1" found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year grade point averages for the students. As the histogram indicates, most of the students had grade point averages between approximately 82 and 95.

Figure 4.9

Cohort 2-9th Grade GPA Data for “First Timer” and “Lifer” Students

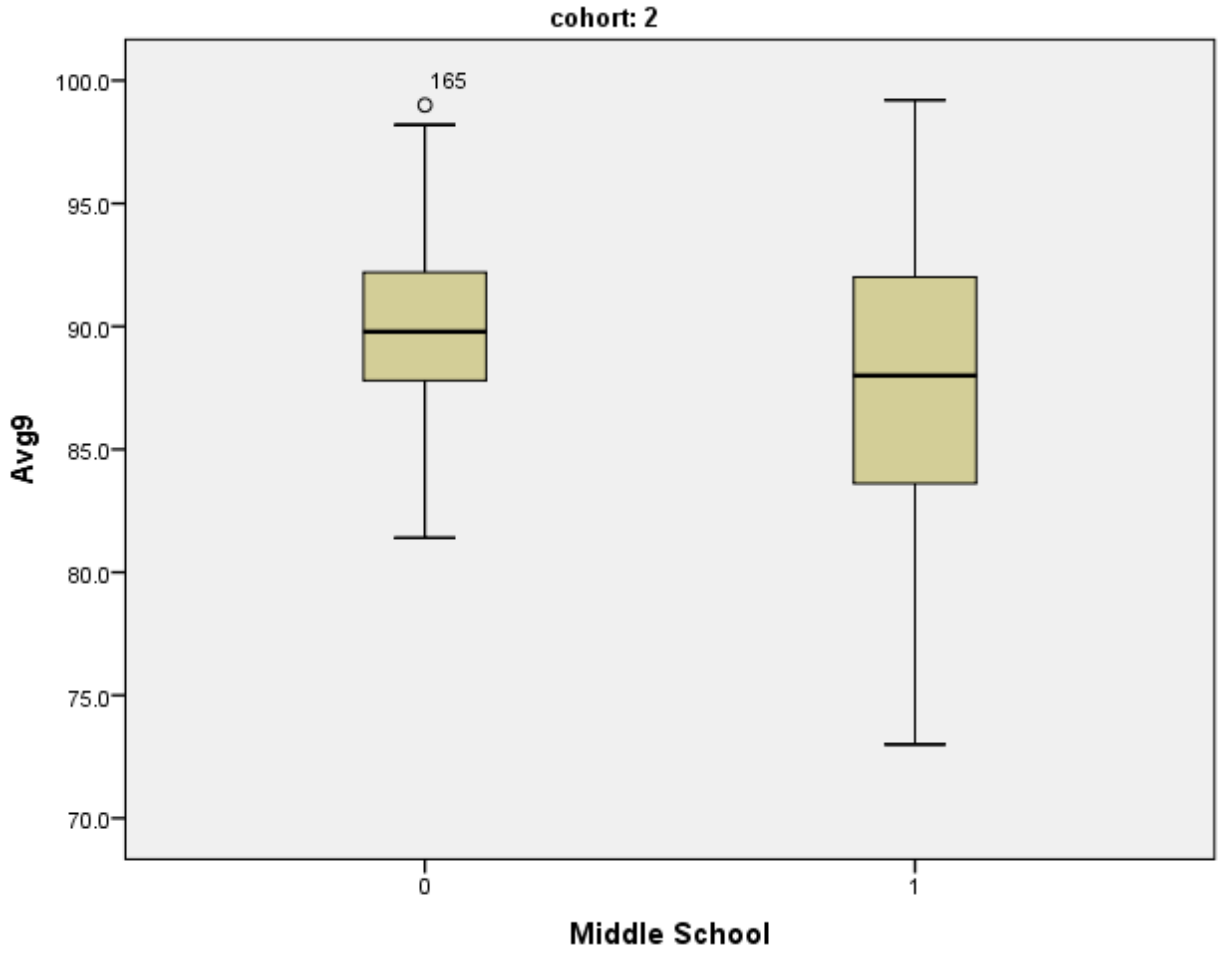

Figure 4.9: This boxplot shows the 9th grade end of year grade point average data for Cohort 2’s 37 “first timer” students as well as the 104 “lifer” students. The Y-axis shows the end of year grade point averages for the students. The X-axis indicates what middle school a student attended by the “0” and “1,” found in the data spreadsheets to indicate non-Gulf School middle school students and Gulf School middle school students respectively. As the histogram indicates, most of the students had grade point averages between 85 and 95, but with greater variation for the “lifer” students.

Table 4.6

Cohort 2-10th Grade GPA Data for All Students

	Non-Gulf School	Gulf School
Frequency of Students	37	104
Mean GPA	90.7	88.745
Variance	19.475	31.339
Standard Deviation	4.4130	5.5981
Mininmum	79.4	74.2
Maximum	99.1	100.6
Range	19.7	26.4

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 37 "first-timer" students, who did not attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 90.7, a variance of 19.475, a standard deviation of 4.413, with a minimum 9th grade end of year grade point average of 79.4, and a maximum grade point average of 99.1, creating a range of 19.7. The 104 "lifer" students, who did attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 88.745, a variance of 31.339, a standard deviation of 5.5981, with a minimum 10th grade end of year grade point average of 74.2, and a maximum grade point average of 100.6, creating a range of 26.4.

Figure 4.10

Cohort 2-10th Grade GPA Data for “First Timer” Students

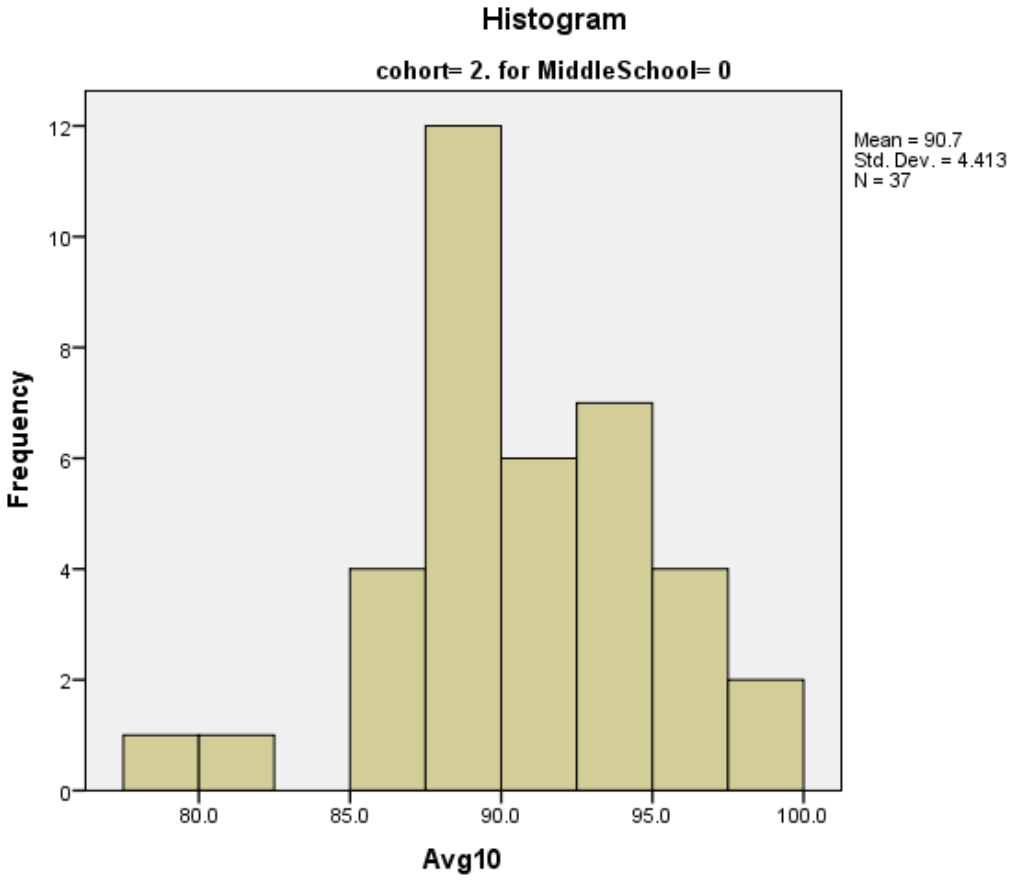

Figure 4.10: This histogram shows the 10th grade end of year grade point average data for Cohort 2’s 37 “first timer” students [indicated by the “0” found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the end of year of grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95.

Figure 4.11

Cohort 2-10th Grade GPA Data for “Lifer” Students

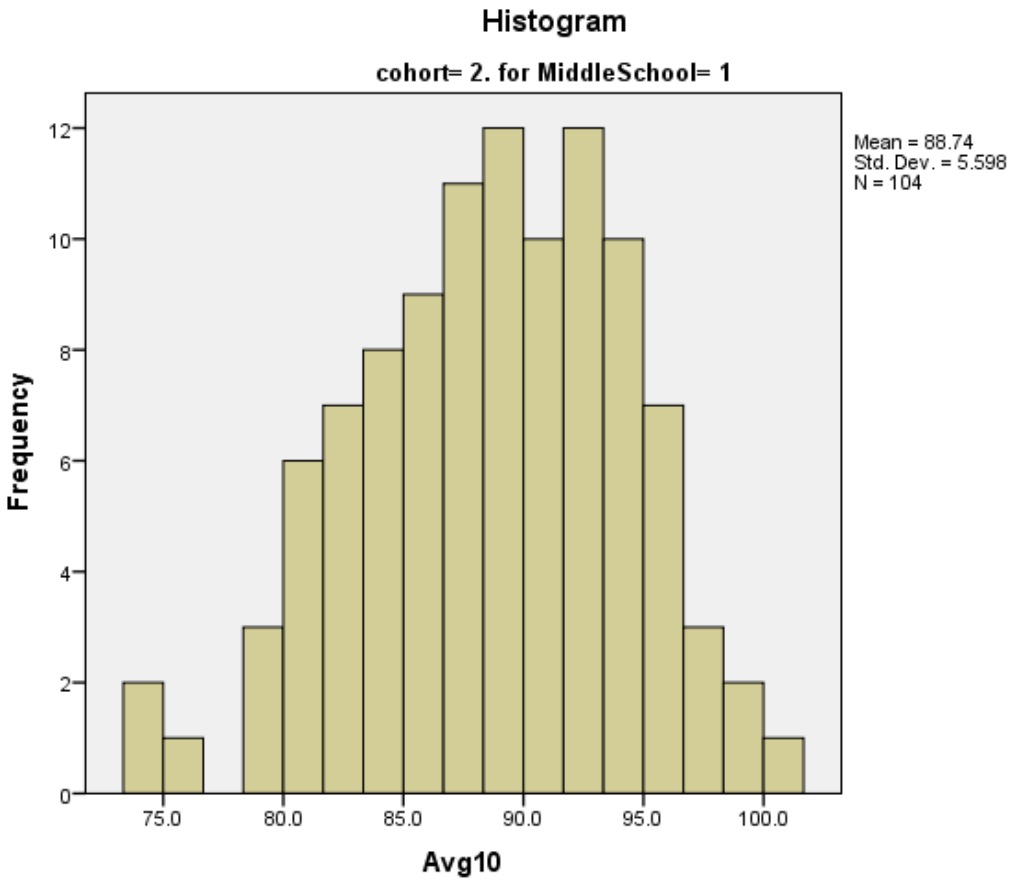

Figure 4.11: This histogram shows the 10th grade end of year grade point average data for Cohort 2’s 43“lifer” students [indicated by the “1” found in the data spreadsheets]. The Y-axis shows the frequency of the students, where the X-axis shows the end of year grade point averages for the students. As the histogram indicates, most of the students had grade point averages between 85 and 95.

Figure 4.12

Cohort 2-10th Grade GPA Data for “First Timer” and “Lifer” Students

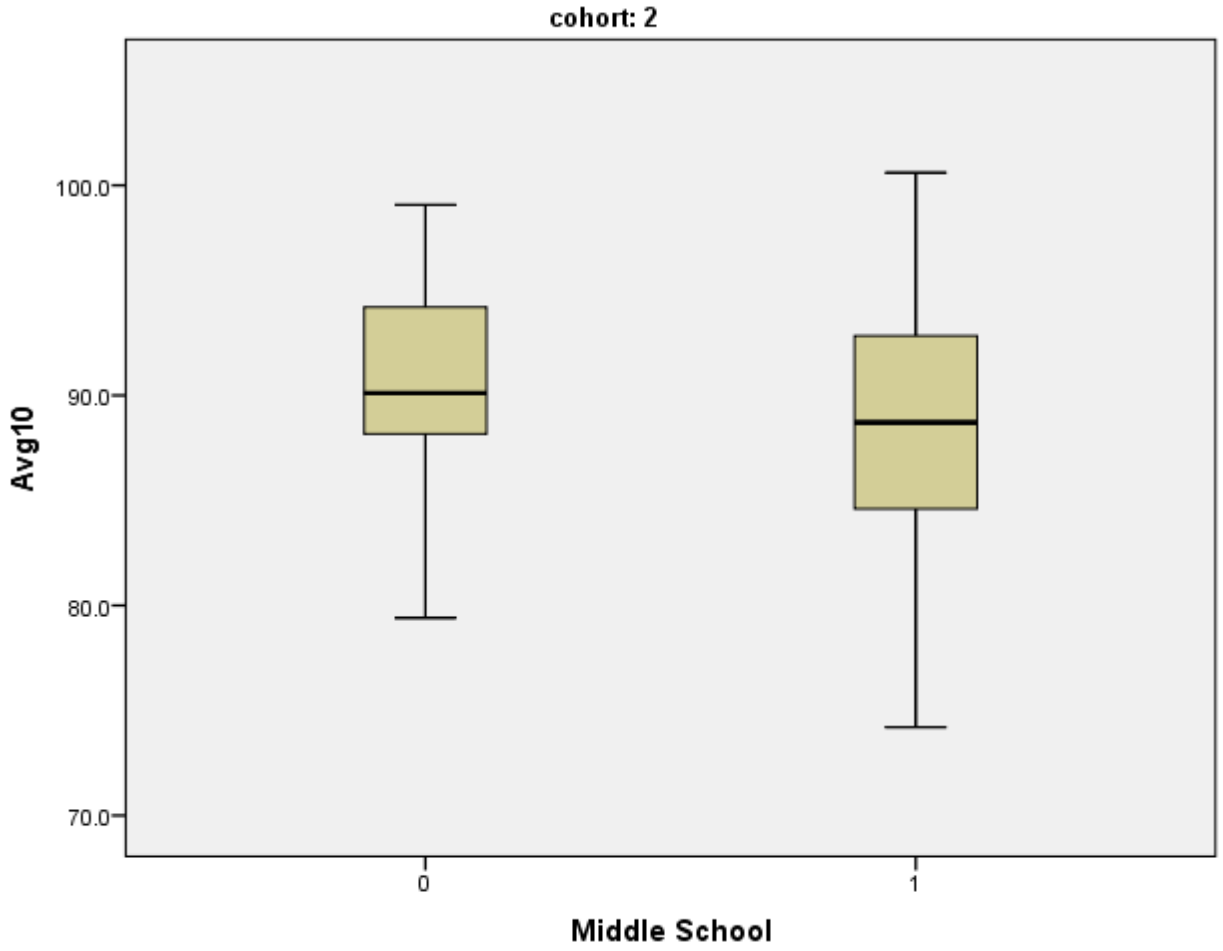

Figure 4.12: This boxplot shows the 10th grade end of year grade point average data for Cohort 2’s 37 “first timer” students as well as the 104 “lifer” students. The Y-axis shows the end of year of grade point averages for the students. The X-axis indicates what middle school a student attended by the “0” and “1,” found in the data spreadsheets to indicate non-Gulf School middle school students and Gulf School middle school students respectively. As the boxplot indicates, most of the students had grade point averages between 85 and 95, but with greater variation for the “lifer” students.

Question 2: *Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?*

Table 4.7

Cohort 1-Extracurriular Activity Score Data for All Students

	Non-Gulf School	Gulf School
Frequency of Students	43	98
Mean Extracurricular Score	8.16	9.11
Variance	14.901	19.152
Standard Deviation	3.86	4.736
Mininmum	0	1
Maximum	16	19
Range	16	18

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 43 "first-timer" students, who did not attend the Gulf School's middle school, had a mean extracurricular score of 8.16, a variance of 14.901, a standard deviation of 3.86, with a minimum extracurricular score of 0 and a maximum extracurricular activity score of 16, creating a range of 16. The 98 "lifer" students, who did attend the Gulf School's middle school, had a mean extracurricular score of 9.11, a variance of 19.152, a standard deviation of 4.736, with a minimum extracurricular score of 1 and a maximum extracurricular activity score of 19, creating a range of 18.

Figure 4.13

Cohort 1-Extracurricular Score Data for “First Timer” Students

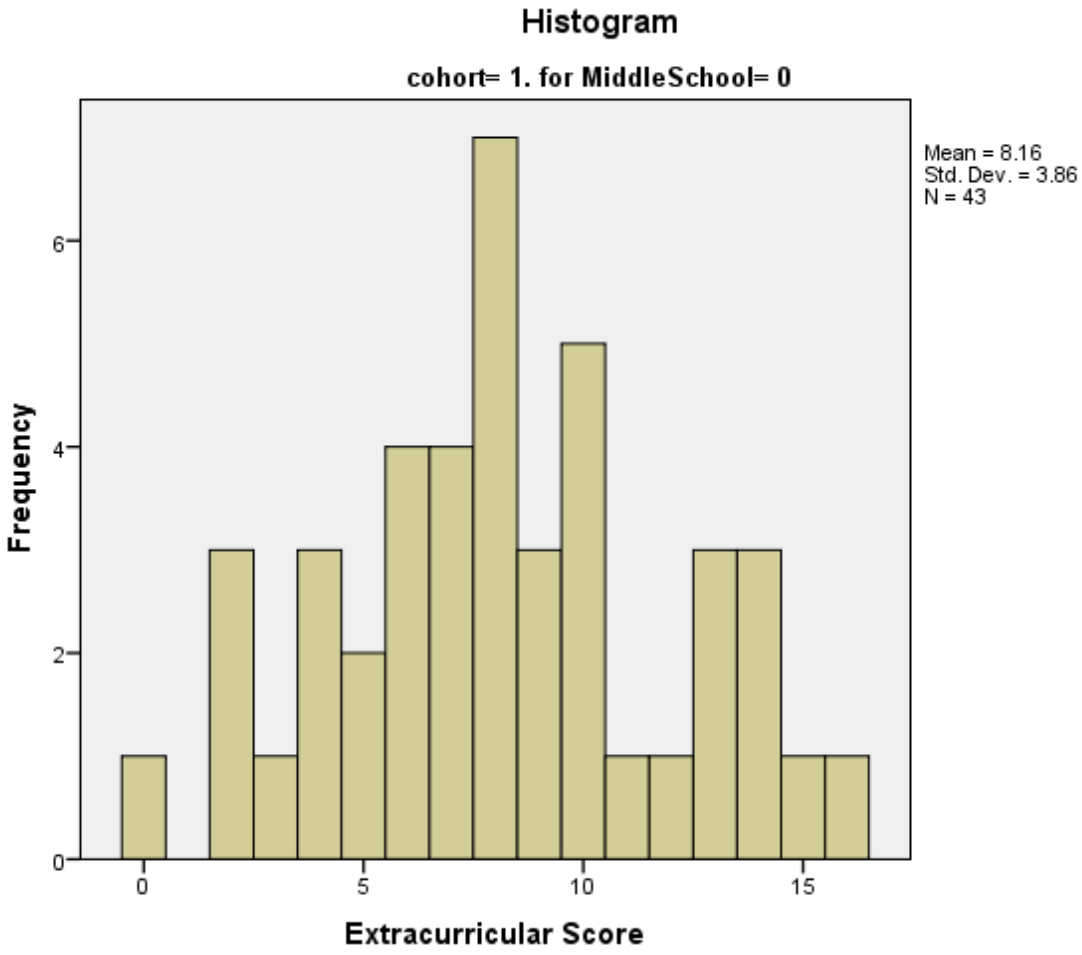

Figure 4.13: This histogram shows extracurricular score data for Cohort 1’s 43“first timer” students [indicated by the “0” found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the extracurricular score for the students. As the histogram indicates, most of the students had extracurricular scores between 6 and 10.

Figure 4.14

Cohort 1-Extracurricular Score Data for “Lifer” Students

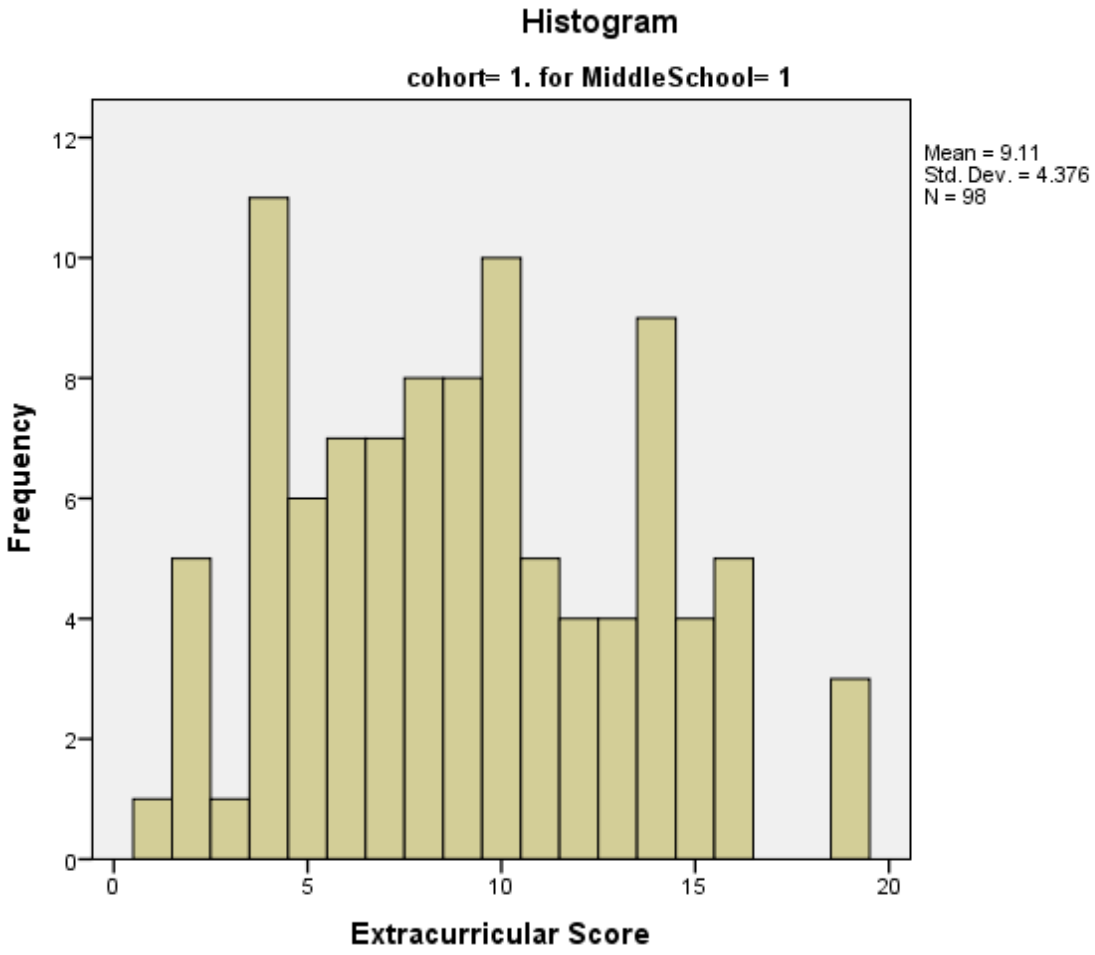

Figure 4.14: This histogram shows extracurricular score data for Cohort 1’s 98 “lifer” students [indicated by the “1” found in the data spreadsheets]. The Y-axis shows the frequency of the students, where the X-axis shows the extracurricular score for the students. As the histogram indicates, the students’ extracurricular scores were more varied, with an extracurricular score of 4 being the most common.

Figure 4.15

Cohort 1-Extracurricular Score Data for “First Timer” and “Lifer” Students

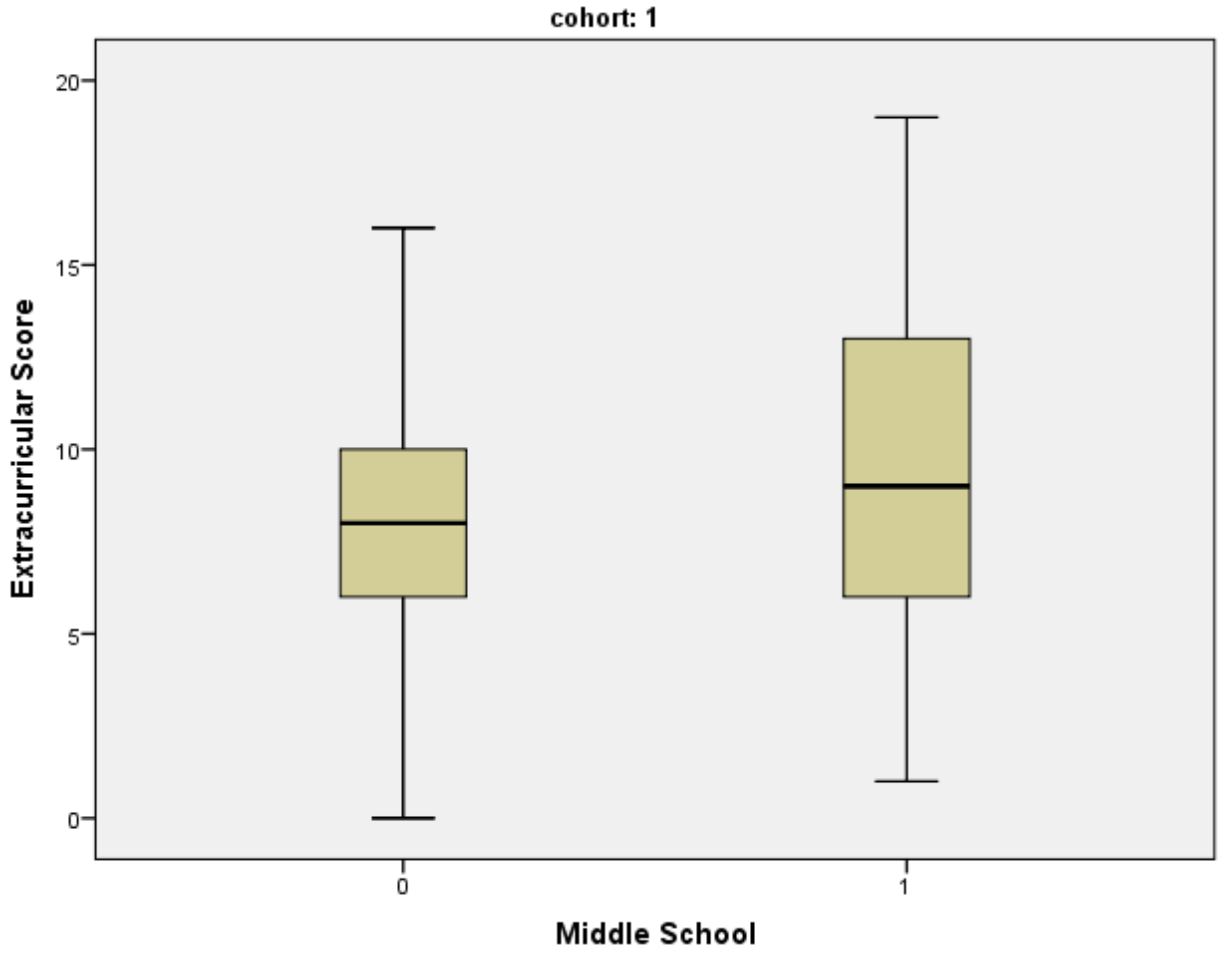

Figure 4.15: This boxplot shows extracurricular score data for Cohort 1’s 43 “first timer” students as well as the 98 “lifer” students. The Y-axis shows the extracurricular score averages for the students. The X-axis indicates what middle school a student attended by the “0” and “1,” found in the data spreadsheets to indicate non-Gulf School middle school students and Gulf School middle school students respectively. As the boxplot indicates, there was greater variation in extracurricular scores for the “lifer” students.

Table 4.8

Cohort 2-Extracurriular Activity Score Data for All Students

	Non-Gulf School	Gulf School
Frequency of Students	37	104
Mean Extracurricular Score	9.24	9.8
Variance	26.023	18.124
Standard Deviation	5.101	4.257
Mininmum	1	0
Maximum	20	20
Range	19	20

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 37 "first-timer" students, who did not attend the Gulf School's middle school, had a mean extracurricular score of 9.24, a variance of 26.023, a standard deviation of 5.101, with a minimum extracurricular score of 1, and a maximum extracurricular activity score of 20, creating a range of 19. The 104 "lifer" students who did attend the Gulf School's middle school had a mean extracurricular score of 9.8, a variance of 18.124, a standard deviation of 4.257, with a minimum extracurricular score of 0, and a maximum extracurricular activity score of 20, creating a range of 20.

Figure 4.16

Cohort 2-Extracurricular Score Data for “First Timer” Students

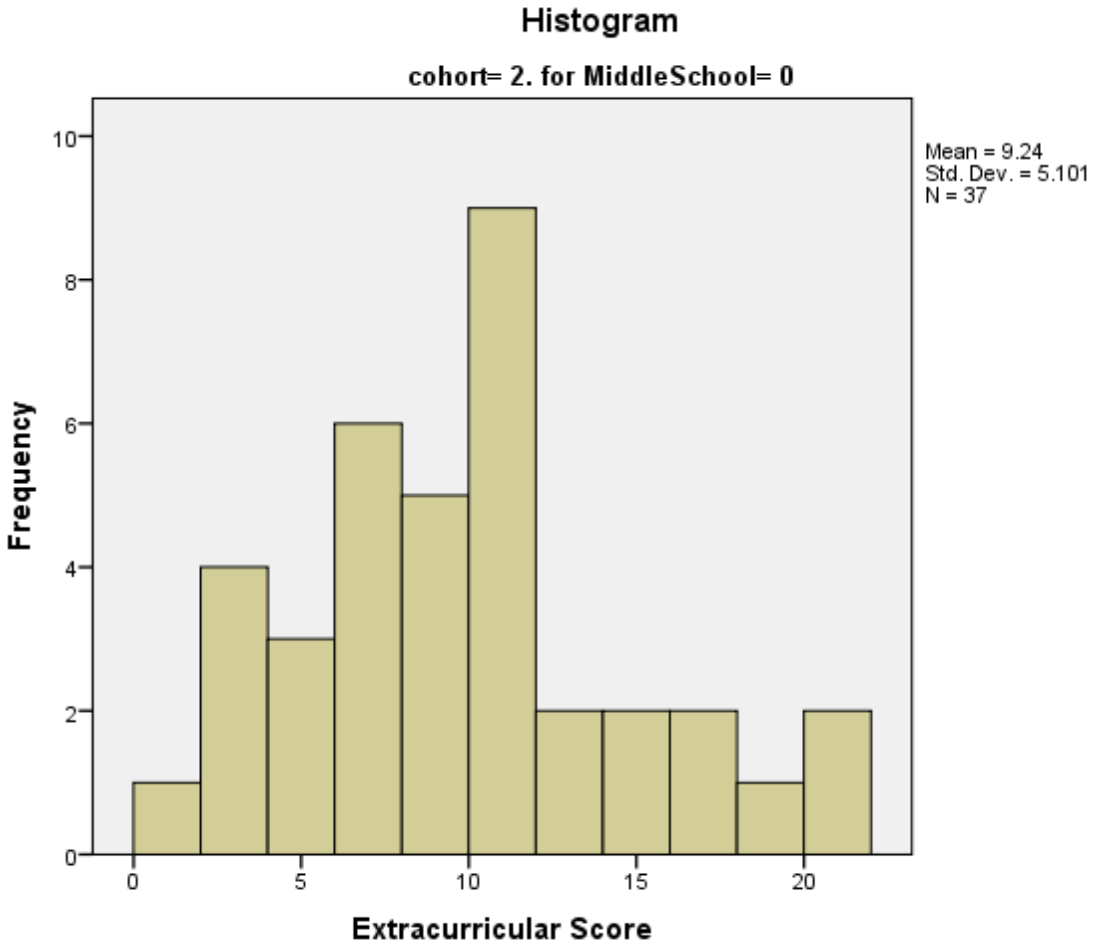

Figure 4.16: This histogram shows extracurricular score data for Cohort 2’s 37 “first timer” students [indicated by the “0” found in the data spreadsheets]. The Y-axis shows the frequency of the students where the X-axis shows the extracurricular score for the students. As the histogram indicates, most of the students had extracurricular scores between 6 and 11.

Figure 4.17

Cohort 2-Extracurricular Score Data for “Lifer” Students

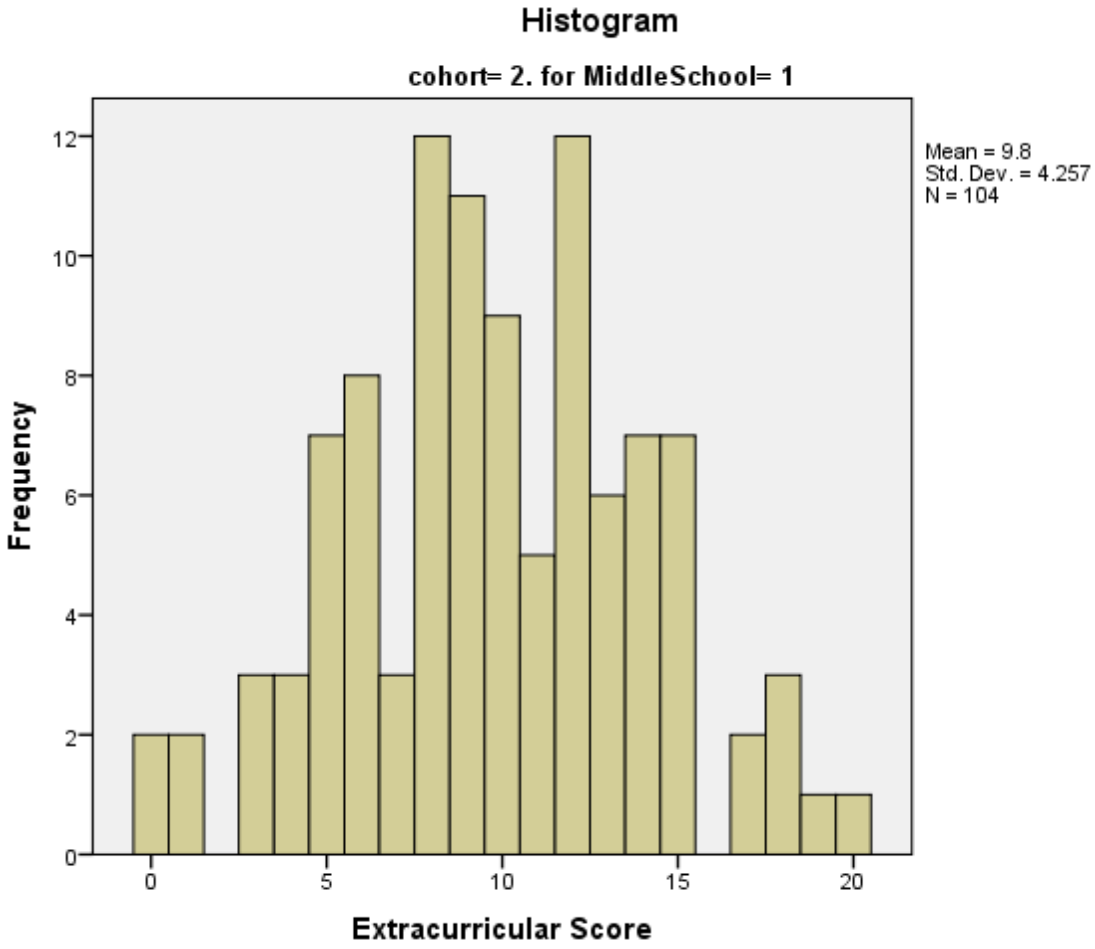

Figure 4.17: This histogram shows extracurricular score data for Cohort 2’s 104 “lifer” students [indicated by the “1” found in the data spreadsheets]. The Y-axis shows the frequency of the students, where the X-axis shows the extracurricular score for the students. As the histogram indicates, most of the students had extracurricular scores between 8 and 12.

Figure 4.18

Cohort 2-Extracurricular Score Data for “First Timer” and “Lifer” Students

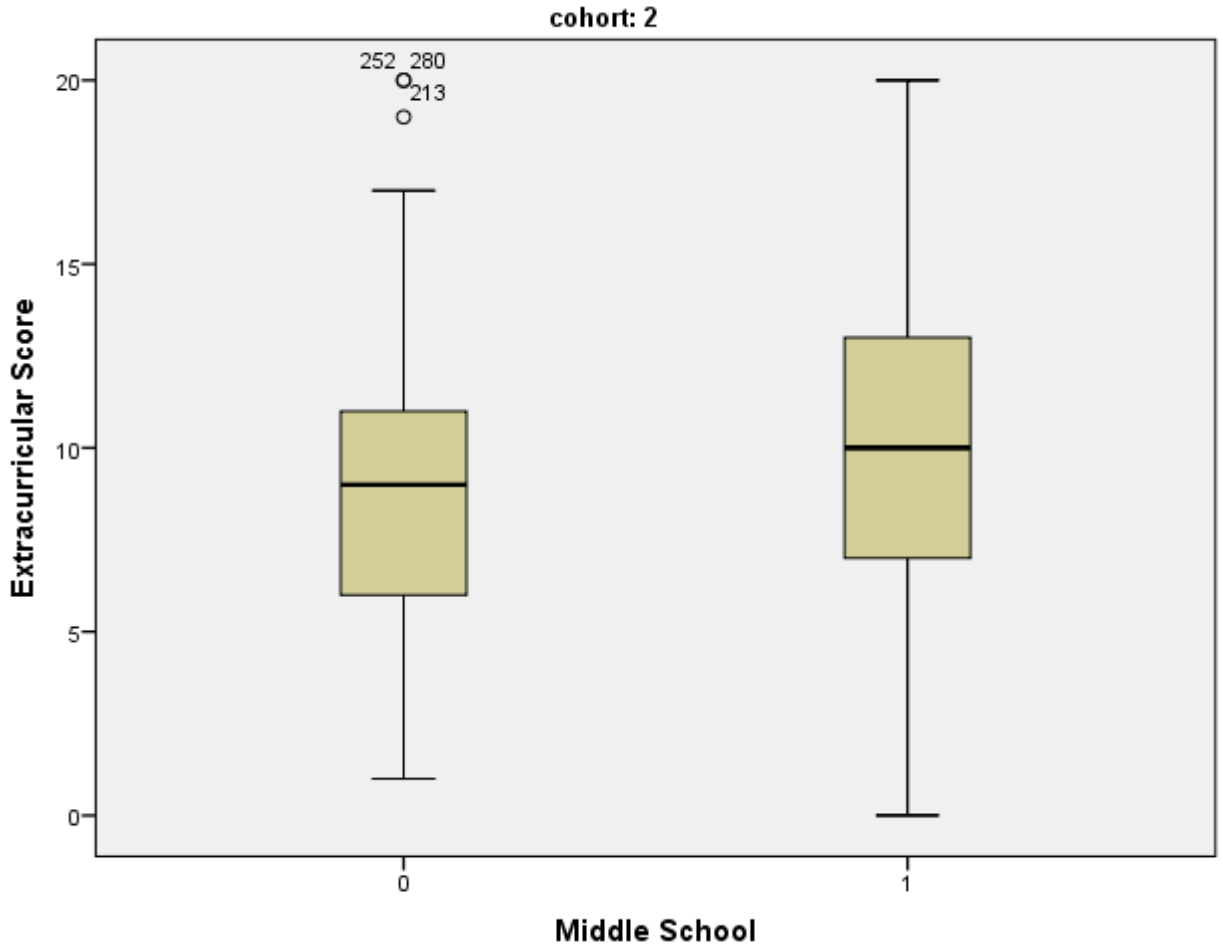

Figure 4.18: This boxplot shows extracurricular score data for Cohort 2’s 37 “first timer” students as well as the 104 “lifer” students. The Y-axis shows the extracurricular score averages for the students. The X-axis indicates what middle school a student attended by the “0” and “1” found in the data spreadsheets to indicate non-Gulf School middle school students, and Gulf School middle school students respectively. As the boxplot indicates, there was slightly greater variation in extracurricular scores for the “lifer” students.

Question 3: *Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?*

Table 4.9

Cohort 1-9th Grade GPA Data for Males Only

	Non-Gulf School	Gulf School
Frequency of Students	21	49
Mean GPA	87.169	86.42
Variance	33.026	26.061
Standard Deviation	5.7468	5.105
Mininmum	77.0	73.4
Maximum	96.8	95.4
Range	19.8	22.0

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 21 "first-timer" male students, who did not attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 87.169, a variance of 33.026, a standard deviation of 5.7468, with a minimum 9th grade end of year grade point average of 77, and a maximum grade point average of 96.8, creating a range of 19.8. The 49 "lifer" male students, who did attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 86.42, a variance of 26.061, a standard deviation of 5.105, with a minimum 9th grade end of year grade point average of 73.4, and a maximum grade point average of 95.4, creating a range of 26.2.

Table 4.10

Cohort 1-10th Grade GPA Data for Males Only

	Non-Gulf School	Gulf School
Frequency of Students	21	49
Mean GPA	88.258	87.895
Variance	28.091	23.21
Standard Deviation	5.3	4.817
Mininmum	78.0	75.4
Maximum	96.5	97.0
Range	18.5	21.6

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 21 "first-timer" male students, who did not attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 88.258, a variance of 28.091, a standard deviation of 5.3, with a minimum 10th grade end of year grade point average of 78, and a maximum grade point average of 96.5, creating a range of 18.5. The 49 "lifer" male students, who did attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 87.895, a variance of 23.21, a standard deviation of 4.817, with a minimum 10th grade end of year grade point average of 75.4, and a maximum grade point average of 97, creating a range of 21.6.

Table 4.11

Cohort 1-9th Grade GPA Data for Females Only

	Non-Gulf School	Gulf School
Frequency of Students	22	49
Mean GPA	90.314	89.652
Variance	16.157	21.56
Standard Deviation	4.0195	4.6432
Mininmum	78.4	77
Maximum	98.4	96.4
Range	20.0	19.4

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 22 "first-timer" female students, who did not attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 90.314, a variance of 16.157, a standard deviation of 4.0195, with a minimum 9th grade end of year grade point average of 78.4, and a maximum grade point average of 98.4, creating a range of 20. The 49 "lifer" female students, who did attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 89.652, a variance of 21.56, a standard deviation of 4.6432, with a minimum 9th grade end of year grade point average of 77, and a maximum grade point average of 96.4, creating a range of 19.4.

Table 4.12

Cohort 1-10th Grade GPA Data for Females Only

	Non-Gulf School	Gulf School
Frequency of Students	22	49
Mean GPA	91.99	91.403
Variance	13.094	14.243
Standard Deviation	3.6186	3.774
Mininmum	85.0	82.5
Maximum	98.2	96.8
Range	13.2	14.3

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 22 "first-timer" female students, who did not attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 91.99, a variance of 13.094, a standard deviation of 3.6186, with a minimum 10th grade end of year grade point average of 85, and a maximum grade point average of 98.2, creating a range of 13.2. The 49 "lifer" female students who did attend the Gulf School's middle school had a mean 9th grade end of year grade point average of 91.403, a variance of 14.243, a standard deviation of 3.774, with a minimum 10th grade end of year grade point average of 82.5, and a maximum grade point average of 96.8, creating a range of 14.3.

Table 4.13

Cohort 2-9th Grade GPA Data for Males Only

	Non-Gulf School	Gulf School
Frequency of Students	20	50
Mean GPA	89.927	87.058
Variance	16.84	35.974
Standard Deviation	4.103	5.9978
Mininmum	81.4	73.0
Maximum	99.0	99.2
Range	17.6	26.2

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 20 "first-timer" male students, who did not attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 89.927, a variance of 16.84, a standard deviation of 4.103, with a minimum 9th grade end of year grade point average of 81.4, and a maximum grade point average of 99, creating a range of 17.6. The 50 "lifer" male students, who did attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 87.058, a variance of 35.974, a standard deviation of 5.9978, with a minimum 9th grade end of year grade point average of 73, and a maximum grade point average of 99.2, creating a range of 26.2.

Table 4.14

Cohort 2-10th Grade GPA Data for Males Only

	Non-Gulf School	Gulf School
Frequency of Students	20	50
Mean GPA	90.02	87.928
Variance	22.81	34.47
Standard Deviation	4.7759	5.8712
Mininmum	79.4	74.2
Maximum	99.1	100
Range	19.7	26.4

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 20 "first-timer" male students, who did not attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 90.02, a variance of 22.81, a standard deviation of 4.7759, with a minimum 10th grade end of year grade point average of 79.4, and a maximum grade point average of 99.1, creating a range of 19.7. The 50 "lifer" male students, who did attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 87.928, a variance of 34.47, a standard deviation of 5.8712, with a minimum 10th grade end of year grade point average of 74.2, and a maximum grade point average of 100, creating a range of 26.4.

Table 4.15

Cohort 2-9th Grade GPA Data for Females Only

	Non-Gulf School	Gulf School
Frequency of Students	17	54
Mean GPA	90.233	87.918
Variance	16.488	27.313
Standard Deviation	4.06	5.226
Mininmum	82.8	73.6
Maximum	98.2	97.8
Range	15.4	24.2

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 17 "first-timer" female students, who did not attend the Gulf School's middle school, had a mean 9th grade end of year grade point average of 90.233, a variance of 16.488, a standard deviation of 4.06, with a minimum 9th grade end of year grade point average of 82.8, and a maximum grade point average of 98.2, creating a range of 15.4. The 54 "lifer" female students, who did attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 87.918, a variance of 27.313, a standard deviation of 5.226, with a minimum 9th grade end of year grade point average of 73.6, and a maximum grade point average of 97.8, creating a range of 24.2.

Table 4.16

Cohort 2-10th Grade GPA Data for Females Only

	Non-Gulf School	Gulf School
Frequency of Students	17	54
Mean GPA	91.499	89.5
Variance	15.475	27.824
Standard Deviation	3.93	5.2748
Mininmum	85.2	78.4
Maximum	99	100
Range	13.8	21.6

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 17 "first-timer" female students, who did not attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 91.499, a variance of 15.475, a standard deviation of 3.93, with a minimum 10th grade end of year grade point average of 85.2, and a maximum grade point average of 99, creating a range of 13.8. The 54 "lifer" female students ,who did attend the Gulf School's middle school, had a mean 10th grade end of year grade point average of 89.5, a variance of 27.824, a standard deviation of 5.2748, with a minimum 10th grade end of year grade point average of 78.4, and a maximum grade point average of 100, creating a range of 21.6.

Question 4: *Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?*

Table 4.17

Cohort 1-Extracurricular Activity Score Data for Males Only

	Non-Gulf School	Gulf School
Frequency of Students	21	49
Mean Extracurricular Score	6.67	6.98
Variance	6.833	16.973
Standard Deviation	2.614	4.12
Mininmum	2	1
Maximum	11	16
Range	9	15

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 21 "first-timer" male students, who did not attend the Gulf School's middle school, had a mean extracurricular activitiy score of 6.67, a variance of 6.833, a standard deviation of 2.614, with a minimum extracurricular score of 2, and a maximum extracurricular score of 11, creating a range of 9. The 49 "lifer" male students, who did attend the Gulf School's middle school, had a mean extracurricular activitiy score of 6.98, a variance of 16.973, a standard deviation of 4.12, with a minimum extracurricular score of 1, and a maximum extracurricular score of 16, creating a range of 15.

Table 4.18

Cohort 1-Extracurricular Activity Score Data for Females Only

	Non-Gulf School	Gulf School
Frequency of Students	22	49
Mean Extracurricular Score	9.59	10.06
Variance	18.92	19.892
Standard Deviation	4.35	4.46
Mininmum	0	2
Maximum	16	19
Range	16	17

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 1, the data show that the 22 "first-timer" female students, who did not attend the Gulf School's middle school, had a mean extracurricular activitiy score of 9.59, a variance of 4.35, a standard deviation of 4.35, with a minimum extracurricular score of 0, and a maximum extracurricular score of 16, creating a range of 16. The 49 "lifer" female students, who did attend the Gulf School's middle school, had a mean extracurricular activitiy score of 10.06, a variance of 19.892, a standard deviation of 4.46, with a minimum extracurricular score of 2, and a maximum extracurricular score of 19, creating a range of 17.

Table 4.19

Cohort 2-Extracurricular Activity Score Data for Males Only

	Non-Gulf School	Gulf School
Frequency of Students	20	50
Mean Extracurricular Score	7.8	10.34
Variance	17.432	13.94
Standard Deviation	4.175	3.734
Mininmum	1	0
Maximum	17	18
Range	16	18

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 20 "first-timer" male students, who did not attend the Gulf School's middle school, had a mean extracurricular activitiy score of 7.8, a variance of 17.432, a standard deviation of 4.175, with a minimum extracurricular score of 1, and a maximum extracurricular score of 17, creating a range of 16. The 50 "lifer" male students, who did attend the Gulf School's middle school, had a mean extracurricular activitiy score of 10.34, a variance of 13.94, a standard deviation of 3.734, with a minimum extracurricular score of 0, and a maximum extracurricular score of 18, creating a range of 18.

Table 4.20

Cohort 2-Extracurricular Activity Score Data for Females Only

	Non-Gulf School	Gulf School
Frequency of Students	17	54
Mean Extracurricular Score	10.94	9.3
Variance	32.184	21.797
Standard Deviation	5.673	4.669
Mininmum	2	0
Maximum	20	20
Range	18	20

Note. Middle School (0 = Non-Gulf School; 1 = Gulf School)

Within Cohort 2, the data show that the 17 "first-timer" female students, who did not attend the Gulf School's middle school, had a mean extracurricular activitiy score of 10.94, a variance of 32.184, a standard deviation of 5.673, with a minimum extracurricular score of 2, and a maximum extracurricular score of 20, creating a range of 18. The 54 "lifer" female students, who did attend the Gulf School's middle school, had a mean extracurricular activitiy score of 9.3, a variance of 21.797, a standard deviation of 4.669, with a minimum extracurricular score of 0, and a maximum extracurricular score of 20, creating a range of 20.

Description of Results in Terms of the Population Sample

Question 1: *Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?*

The data indicates that in both Cohorts and in both grades 9 and 10, the non-Gulf School Middle School students performed at a higher rate in terms of academics as the average grade point averages for "first-timer" students was higher than that of the "lifer" students. Interestingly, the difference in average grade point average was larger within Cohort 2 over Cohort 1.

To answer research question 1: while "first-timer" students outperformed "lifer" students academically speaking in their first two years in the upper school, the finding was not statistically significant.

Question 2: *Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?*

The data indicates that for both Cohorts, the "lifer" students participated in more extracurricular activities than that of the "first-timer" students. Cohort 2 also participated in more extracurricular activities overall compared to both "lifer" and "first-timer" students in Cohort 1 and overall when compared between the Cohorts.

To answer research question 2: while "lifer" students involve themselves more frequently in extracurricular activities than "first-timer" students, the finding was not statistically significant.

Question 3: *Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?*

The data indicates that "first-timer" students perform at a higher level academically across both genders than that of their "lifer" counterparts. Interestingly,

females outperformed the males overall for both cohorts and across middle schools attended.

To answer research question 3: while "first-timer" female students outperformed their male counterparts overall in addition to the "lifer" female students in academic performance, the finding was not statistically significant.

Question 4: *Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?*

The data indicates that "lifer" students tended to involve themselves more frequently in extracurricular activities than that of "first-timer students" across genders in Cohort 1. In Cohort 2, the "first timer" female students involved themselves more frequently in extracurricular activities than that of their "lifer" counterparts. This is the only time when there was a discrepancy in the trend of one group outperforming another across Cohorts, middle-schools attended, or genders.

To answer research question four: while "lifer" students tend to involve themselves in extracurricular activities more frequently than their "first-timer" counterpart, and female "first-timer" students involved themselves more frequently in extracurricular activities than their "lifer" counterparts within Cohort 2, the finding was not statistically significant.

Chapter 5
Conclusions

This study sought to better understand how students from different middle schools performed upon enrollment in an upper school where a fraction of the entering class enrolled from institution's own middle school, and other students enrolled from another middle schools altogether. The findings of this study can help to shape the Gulf School's institutional mission and other like independent schools.

Overview of Study

This study was inspired by my own experience as "first-timer" student myself new to an independent school and feeling personally out-of-place at times. The main focus of this study was "The Gulf School" (a pseudonym) which is an independent Kindergarten through 12th grade day school located in a major city in the southwestern United States. The literature review consisted of a history of common schools and the creation of independent schools in the United States. This was followed by an examination of the school choice marketplace with particular attention on the behavior of affluent parents and the independent school admissions process. Lastly, there was a section on student socialization and the transition from middle to high school.

The research design consisted of securing Institutional Research Board approval for an archival data study using student records for the Gulf School's graduating classes of 2013 and 2014 (Cohorts 1 & 2) respectively in the study. The data gathered was focused solely on the student's academic and extracurricular records for both 9th and 10th grade with regard to academics and extracurricular activity participation. Additionally, data from the Gulf School's admissions office was obtained to determine if students had attended middle school at the Gulf School, or at another middle school.

Once all of these data were collected, they were organized into a spreadsheet for each cohort [Appendix B & C]. This data was then analyzed statistically to answer the four research questions:

Table 5.1

Study's Research Questions

Research Questions	Data Source	Collection Procedure	Data Analysis
1) Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
2) Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
3) Do the upper school students perform at a different level in academics depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages
4) Do the upper school students involve themselves more frequently in extracurricular activities depending on whether they attended the Gulf School's feeder middle school or a non-feeder middle school based on gender?	Admissions data and student records	Requested from appropriate campus departments and divisions	Frequencies and Percentages

The study found that students who did not attend the Gulf School's middle school outperformed their classmates who did attend the Gulf School's middle school in terms of academic achievement, while the reverse held true with regard to the frequency of

involvement in extracurricular activities. These were also the findings when controlled for gender.

Discussion of Results

The results suggest four main conclusions. First, "first-timer" students tended to perform at a higher rate academically than that of their "lifer" counterparts, across cohorts, middle schools attended, and gender. Second, "lifer" students tended to involve themselves more frequently in extracurricular activities than that of their "first-timer" counterparts for both genders. Thirdly, female students, regardless of the middle school they attended, outperformed their male counterparts in terms of academics. Lastly, and with the exception of "first-timer" female students in Cohort 2, the second finding held true in regard to extracurricular involvement when controlled for gender.

In examining the answers to research questions 1 and 2, it is evident that there are notable and important differences between the "lifer" and "first timer" students in terms of their academic achievement and extracurricular involvement. The "first timer" students tended to do better academically than that of their "lifer" counterparts. There are a few possibilities as to why this is the case. The Gulf School's class sizes at the lower and middle school are smaller than that of upper school which means that admission into the lower and middle school is arguably more competitive than that of the upper school. Moreover, the "first timer" students who enroll at the Gulf School beginning in the upper school are perhaps more likely to be what admissions calls "legacy" or "community applicant" candidates. In other words, some of the "lifer" students were admitted earlier on in their education to the Gulf School because of a parent and/or sibling who has or had already attended the Gulf School. Giving some "preference" to applicants who have some

ties to the institution is a fairly common practice in admissions for virtually any education institution (Eisenstock, 2006). Rephrased, for some of the "lifer" students the standard for admission into the lower or middle school was not as high because of their "legacy" or "community applicant" status.

For the "first timer" students, this would mean that in order to gain admission to the Gulf School, the standards would have to be higher for them than some of the "lifer" students who had already been admitted. This is not to say that "every lifer student benefited from a legacy preference." However, the likelihood of a "lifer" student in the upper school having benefitted from such a policy is naturally higher within the admissions process than for a "first timer" student. Thus, the admissions fate of a "first-timer" student is weighed more heavily on pure objective data (transcripts, test scores etc.) and less on the "hook" (a common term in admissions which means that the student has a characteristic that is desirable to the institution. This could be an athletic, artistic, or scientific talent, demographic characteristics, legacy status, or simply development interest to the institution), of being a legacy applicant. Even more significant than this fact is the simple reality that for many of the "first timer" applicants, the Gulf School will have far more data on that student's academic achievement, extracurricular profile, and so on because they are applying to the Gulf School later on in life. For all of these reasons, it follows that the "first timer" students tend to outperform their "lifer" counterparts in academic achievement, because they are perhaps admitted as stronger students.

For these very reasons above, it can also possibly explain why "lifer" students involve themselves in extracurricular activities more frequently than their "first timer"

counterparts. “Lifer” students know the landscape of the Gulf School: the traditions, the clubs, the fight songs at athletic events, and the social pecking order of everything from peer groups to what extracurricular activities to be a part of. To put it in non-academic terms: the “lifer” students know what’s cool to join, and already have a familiarity with the academic, extracurricular, and social landscape when they leave the Gulf School’s middle school and enter the upper school. Additionally, Gulf School middle school students are required by the Gulf School to participate in extracurricular activities, so the “lifer” students already have a culture of participating in extracurricular activities going into the upper school. Thus, the “new kid” is faced with more hurdles than that of the students who merely went from one part of campus to the other.

Research questions three and four both addressed the role that gender plays within the broader questions of academic achievement and extracurricular involvement. With the one exception of “first timer” Cohort 2 females involving themselves more frequently than their “lifer” female counterparts, the females outperformed the males in every category across cohorts. This suggests that much more research could be conducted as to why females tend to outperform the males within an independent school environment.

Implications for School Leaders

The major implications for the Gulf School, and school communities like it, are many. However, the first questions that an institution has to ask itself are: who are we and who do we want to be? If the school is content with who they are, then are they remaining true to their mission? What data such as this found in this study suggest as a next course of action for the Gulf School (if anything)? Is anything “wrong” per se? True, there are disparities that are shown within the data to answer each research question, but

is it different enough to suggest changes? Should "lifer" students and "first timer" students be equal in terms of academic achievement and extracurricular involvement? And, if so, why?

If the Gulf School interprets these results as something to be "corrected," then admissions policies and Dean of Students issues need to be reevaluated. Perhaps legacy preference in the admissions process should be minimized or even discontinued, (but this would upset alumni and development). Perhaps the Dean of Students should work with other entities on campus to acclimate "first timer" students to campus more quickly which might lead to them joining more extracurricular activities, (but then again it might be difficult for adult education practitioners to "force" the fickle forces of adolescent socialization). Or perhaps this study merely highlighted a reality that these data merely explain the mechanics of an independent day school and there's nothing that necessarily needs to change: this is the way things are.

Whatever the Gulf School and others like it choose to do with the data, the important conclusions suggest that where a student attended middle school and their gender can play a role in shaping that student's overall record in academics and extracurricular performance. Whether or not these data create a cause for concern is up to the institutions themselves.

Implications for Further Research

To build upon this research, a close examination of the students themselves and why they might strive for academic achievement and extracurricular involvement. Understanding the driving force behind the decisions that students make will likely yield even more helpful data than that found within in this study as it will be more specific. A

survey of students and their attitudes about being in the upper school might be particularly telling especially if the survey was conducted in grades 8-10.

Another idea for further research would entail taking the data set and merely adding another “0” & “1” variable [“0”= Non-Gulf School & “1”= Gulf School] to indicate attendance in the Gulf School’s lower school (Kindergarten-fifth grade) to see if there are any differences between students who were indeed “lifer” students (meaning they enrolled in the lower school) compared to students who enrolled in the Gulf’s middle school. Rephrased, this study can be conducted with very similar procedures to look at a more longitudinal study of Gulf School students’ performance in terms of academics and extracurricular activity involvement by looking at which students enrolled in the lower school as opposed to later grades.

Among the questions that these surveys might explore could include topics such as whether or not “first timer” students work hard to prove themselves academically because of the “prestige” of the place that they have enrolled in. This might explain for the higher grade point averages from “first timer” students. Other topics could include why students chose to join extracurricular activities or not, the differences in approach to academics and extracurricular based on gender. Lastly, admissions data (such as standardized testing), might help to explain who is being admitted, why, and how they perform upon enrollment.

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Appendix A

Approval from the University of Houston Human Subject Research Committee

UNIVERSITY of HOUSTON

DIVISION OF RESEARCH

January 10, 2013

Nicholas Accrocco
c/o Mr. Robert C. Bomeman
Dean, Education

Dear Nicholas Accrocco,

Based upon your request for exempt status, an administrative review of your research proposal entitled "Examination of Upper School Performance Related to Middle School Attended at an Independent School" was conducted on December 12, 2012.

In accordance with institutional guidelines, your project is exempt under Category 4, contingent upon the following:

- The response to question **11** of the application must clarify where the data is being obtained from. If the data is not publically available a letter of cooperation stating the investigator has permission to use the data for analyses must be submitted to the CPHS.
- The response to question 25 of the application should confirm that analyzed data results will remain on UH property (provide room number or name of individual responsible) for a minimum of 3 years following completion of the study. The study is complete when all data analysis is finished.
- The response to question 30 of the application should indicate "Yes -N/A Study of Existing Data."
- The response to question 8 of the application should indicate, "Study of Existing Data".
- The response to questions 22 and 24 of the application should indicate "No".
- The response to questions 26 and 29 of the application should indicate "No –Study of Existing Data."
- The response to questions 6.03 - 6.06 indicate "All data used will be in regards to the graduating classes of 2013 and 2014." Please confirm all data being used for this study is existing data.

The required revisions to your application must be submitted online via the Research Administration Management Portal (RAMP), by January 24, 2013 or the Committee's sanction may be revoked. To expedite review: please highlight the changes made for all revised documents that will be uploaded.

As long as you continue using procedures described in this project, you do not have to reapply for review. * Any modification of this approved protocol will require review and approval by the Committee.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,

Kristin Rochford, MPH, CIP, CPIA
Director, Research Compliance

Protocol Number: 13170-EX

316 E. Cullen Building Houston, TX 77204-2015 (713) 743-9204 Fax: (713) 743-9577

COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS

Appendix B

Cohort 1 Raw Data

ID#	**Gender**	**Middle School (0=Non Gulf School 1=Gulf School)**	Avg 9th	Avg 10th	Extracurricular Score
3601	M	1.00	**90.00**	**91.47**	6
3602	M	1.00	**85.80**	**88.42**	15
2907	F	1.00	**91.27**	**92.67**	5
2908	F	1.00	**87.27**	**88.00**	2
3603	F	1.00	**83.40**	**89.40**	7
3605	F	1.00	**91.60**	**93.60**	9
4104	M	1.00	**82.60**	**87.60**	8
2970	F	1.00	**77.00**	**82.50**	4
1672	F	1.00	**87.00**	**92.20**	5
3225	M	0.00	**96.80**	**96.20**	7
4024	M	1.00	**81.40**	**82.80**	10
2977	M	1.00	**91.18**	**89.40**	9
3608	M	1.00	**92.20**	**92.00**	4
3610	M	1.00	**89.40**	**90.60**	6
3226	F	0.00	**93.37**	**95.13**	9
3611	F	1.00	**92.00**	**92.40**	9
2984	F	1.00	**89.60**	**90.25**	8
3227	M	0.00	**94.40**	**94.80**	2
1405	F	1.00	**92.40**	**94.20**	19
3228	M	0.00	**88.60**	**89.45**	10
2912	M	1.00	**81.80**	**90.00**	4
2876	M	1.00	**84.20**	**85.40**	4
3229	M	0.00	**91.20**	**93.60**	3
3035	F	1.00	**92.60**	**93.92**	4
3618	F	1.00	**96.40**	**96.80**	14
3619	F	1.00	**91.40**	**92.20**	8
2914	F	1.00	**94.80**	**95.80**	14
3620	M	1.00	**82.20**	**90.60**	5
3621	M	1.00	**92.00**	**93.40**	7
3230	F	1.00	**82.80**	**86.60**	14
2916	F	1.00	**92.40**	**93.40**	10
4145	M	1.00	**78.00**	**81.91**	9
3624	F	1.00	**90.00**	**92.00**	5
3231	F	0.00	**93.53**	**96.48**	10
3625	M	1.00	**85.52**	**88.00**	8
2886	F	1.00	**89.40**	**92.20**	16
4034	F	1.00	**92.40**	**94.40**	12
3232	M	0.00	**78.60**	**78.00**	8
2919	F	1.00	**88.60**	**88.80**	7
3630	M	1.00	**92.60**	**92.70**	4
2920	M	1.00	**80.80**	**85.73**	6
3233	F	0.00	**92.60**	**95.40**	4

2921	M	1.00	**83.80**	**82.73**	8
4043	F	1.00	**86.45**	**89.00**	11
4302	F	0.00	**90.20**	**90.00**	12
1428	M	1.00	**86.40**	**85.80**	10
3634	F	1.00	**86.80**	**89.00**	10
3234	F	0.00	**98.40**	**98.23**	6
3235	M	0.00	**87.20**	**84.60**	4
4050	F	1.00	**78.80**	**83.00**	3
2888	F	1.00	**93.00**	**95.80**	6
3236	M	0.00	**79.40**	**83.40**	2
3237	M	0.00	**84.80**	**89.40**	8
2890	M	1.00	**86.40**	**87.20**	14
3238	F	0.00	**89.40**	**91.48**	14
3239	F	0.00	**90.77**	**89.73**	16
3643	F	1.00	**92.80**	**94.60**	12
3639	M	1.00	**74.60**	**78.36**	7
3645	M	1.00	**89.80**	**88.20**	11
4113	M	1.00	**85.17**	**87.10**	4
3240	F	0.00	**92.60**	**95.20**	8
3241	M	0.00	**86.60**	**87.27**	8
3650	F	1.00	**96.00**	**96.55**	14
3760	F	1.00	**90.80**	**92.60**	5
3242	F	0.00	**86.20**	**89.00**	8
2894	M	1.00	**85.02**	**87.43**	7
2927	M	1.00	**73.40**	**77.17**	10
4057	M	1.00	**82.40**	**83.82**	14
2928	F	1.00	**93.00**	**92.60**	6
3243	F	0.00	**90.20**	**91.38**	13
3244	M	0.00	**90.80**	**91.47**	5
3090	M	1.00	**93.00**	**95.87**	2
3245	F	0.00	**92.60**	**96.30**	14
4303	M	0.00	**77.00**	**79.80**	4
3247	M	0.00	**83.60**	**82.35**	8
3248	F	0.00	**90.80**	**91.40**	14
3005	F	1.00	**82.73**	**83.60**	15
2933	M	1.00	**80.60**	**81.40**	8
3668	M	1.00	**88.60**	**89.87**	4
3672	M	1.00	**90.80**	**89.80**	4
3676	F	1.00	**96.00**	**96.60**	10
3678	M	1.00	**92.60**	**91.50**	16
4374	F	0.00	**92.30**	**91.80**	2
3249	F	0.00	**88.40**	**92.98**	13
3250	M	0.00	**93.20**	**94.44**	8
3251	F	0.00	**87.20**	**86.00**	0
3686	F	1.00	**93.73**	**92.80**	13
4304	F	0.00	**88.80**	**89.75**	13
4144	F	1.00	**93.05**	**95.02**	6
3252	F	0.00	**88.00**	**91.28**	15

2938	M	1.00	**91.60**	**88.00**	10
3694	M	1.00	**85.60**	**91.33**	11
2163	F	1.00	**91.40**	**95.36**	14
3253	M	0.00	**78.40**	**84.80**	6
3096	M	1.00	**88.40**	**87.43**	14
3254	F	0.00	**88.56**	**91.02**	7
3702	M	1.00	**85.00**	**78.80**	2
3704	M	1.00	**85.60**	**92.62**	15
3706	M	1.00	**90.60**	**93.10**	2
2944	F	1.00	**88.20**	**90.57**	4
2945	M	1.00	**87.78**	**85.33**	8
4005	M	1.00	**86.60**	**87.64**	16
3038	M	1.00	**88.40**	**88.93**	2
3710	F	1.00	**91.40**	**92.60**	19
3711	M	1.00	**86.20**	**87.40**	7
3255	M	0.00	**81.56**	**83.00**	10
3712	F	1.00	**89.20**	**90.35**	11
3759	F	1.00	**86.20**	**86.80**	9
3256	M	0.00	**88.60**	**86.60**	6
1675	F	1.00	**80.09**	**85.36**	13
2951	M	1.00	**77.20**	**75.40**	6
3722	M	1.00	**88.90**	**88.60**	1
1384	F	1.00	**86.80**	**89.00**	5
3257	F	0.00	**78.40**	**87.00**	10
2952	M	1.00	**93.00**	**95.80**	12
3258	F	0.00	**96.40**	**97.40**	9
3723	F	1.00	**91.20**	**95.60**	16
3725	F	1.00	**95.08**	**91.60**	14
3727	F	1.00	**92.80**	**92.00**	16
4011	F	1.00	**83.40**	**88.20**	13
3259	M	0.00	**90.40**	**91.00**	7
3731	F	1.00	**89.00**	**91.33**	10
4089	M	1.00	**79.00**	**81.73**	10
3733	M	1.00	**93.80**	**93.75**	15
4092	M	1.00	**88.20**	**91.76**	12
3541	F	1.00	**94.40**	**94.60**	9
3260	M	0.00	**87.20**	**90.55**	10
3734	M	1.00	**88.00**	**90.17**	4
4136	M	1.00	**82.80**	**85.80**	9
3023	F	1.00	**91.20**	**92.20**	19
3261	F	0.00	**91.36**	**91.80**	9
3262	M	0.00	**95.40**	**96.50**	11
3263	M	0.00	**88.60**	**89.40**	6
2964	M	1.00	**91.80**	**90.00**	11
3264	M	0.00	**88.20**	**86.80**	7
3265	F	0.00	**86.82**	**85.00**	5
3744	M	1.00	**95.40**	**97.00**	9
4148	F	1.00	**85.20**	**87.05**	10

3758	F	1.00	**83.27**	**83.60**	8
2967	F	1.00	**94.40**	**95.80**	13
3754	F	1.00	**94.20**	**94.20**	7

Appendix C

Cohort 2 Raw Data

ID#	Gender	Middle School (0=Non Gulf School 1=Gulf School)	Avg 9th	Avg 10th	Extracurricular Score
4309	M	0.00	**83.40**	**79.40**	10
3068	F	1.00	**81.40**	**82.60**	15
1076	M	1.00	**91.80**	**92.93**	13
4313	M	0.00	**87.40**	**89.33**	10
2090	F	1.00	**85.80**	**86.55**	11
1103	M	1.00	**84.80**	**87.80**	10
3070	F	1.00	**88.00**	**87.04**	14
2092	F	1.00	**87.60**	**86.70**	10
1505	F	1.00	**80.00**	**81.40**	6
4319	M	0.00	**93.80**	**93.62**	13
4107	M	1.00	**86.40**	**89.40**	8
4320	M	0.00	**92.20**	**94.93**	7
2094	M	1.00	**95.40**	**95.40**	15
4029	M	1.00	**91.20**	**90.80**	14
2095	F	1.00	**94.00**	**95.53**	7
4109	M	1.00	**87.60**	**88.60**	14
4326	M	0.00	**92.00**	**93.67**	11
2096	M	1.00	**89.33**	**90.33**	15
2098	F	1.00	**95.11**	**97.20**	12
3223	F	1.00	**88.00**	**89.80**	13
2099	M	1.00	**84.80**	**88.37**	10
2101	M	1.00	**92.02**	**93.47**	18
2102	M	1.00	**94.37**	**91.80**	6
4332	M	0.00	**99.00**	**99.07**	13
1072	M	1.00	**83.00**	**86.60**	17
2103	M	1.00	**88.00**	**88.15**	14
1029	F	1.00	**90.80**	**92.73**	4
2104	M	1.00	**85.40**	**81.69**	9
3078	F	1.00	**90.20**	**90.40**	1
3079	M	1.00	**78.60**	**75.60**	8
4046	F	1.00	**83.00**	**82.40**	4
4472	F	0.00	**82.80**	**89.40**	16
2105	M	1.00	**91.20**	**92.28**	12
2106	F	1.00	**84.40**	**85.00**	12
3081	F	1.00	**89.40**	**90.67**	10
4051	M	1.00	**82.82**	**80.50**	8
4111	M	1.00	**75.60**	**74.20**	11
4137	M	1.00	**91.60**	**88.82**	9
2107	F	1.00	**85.80**	**88.00**	11
2110	F	1.00	**94.20**	**95.00**	15
2111	F	1.00	**73.60**	**83.56**	3
3083	M	1.00	**94.00**	**94.60**	9

2112	F	1.00	**87.60**	**90.10**	9
4345	F	0.00	**88.00**	**85.20**	11
2113	M	1.00	**81.20**	**88.36**	5
2117	F	1.00	**82.50**	**78.40**	6
2118	M	1.00	**99.20**	**100.60**	9
4055	F	1.00	**83.80**	**84.60**	3
1043	F	1.00	**79.40**	**85.55**	15
2119	F	1.00	**84.00**	**88.00**	3
2120	M	1.00	**76.75**	**82.80**	14
2121	F	1.00	**84.20**	**85.36**	7
1456	M	1.00	**92.80**	**93.67**	8
2122	F	1.00	**92.80**	**93.60**	9
4358	M	0.00	**90.80**	**90.11**	10
2123	F	1.00	**88.60**	**88.91**	12
3443	F	1.00	**93.80**	**96.20**	6
2124	M	1.00	**90.60**	**92.60**	6
1080	F	1.00	**93.00**	**96.40**	12
4362	F	0.00	**88.20**	**88.20**	14
4365	M	0.00	**85.87**	**89.20**	2
4369	M	0.00	**88.40**	**87.80**	1
4064	F	1.00	**97.40**	**99.40**	10
1122	M	1.00	**89.00**	**91.80**	6
2125	F	1.00	**93.37**	**93.97**	12
4373	F	0.00	**98.20**	**99.00**	10
1123	M	1.00	**92.60**	**92.80**	13
4376	F	0.00	**90.96**	**91.60**	6
2126	M	1.00	**90.20**	**92.83**	18
4378	F	0.00	**92.40**	**94.48**	8
4379	F	0.00	**95.20**	**96.60**	2
4380	F	0.00	**85.40**	**89.20**	19
3685	F	1.00	**89.80**	**94.00**	20
2127	M	1.00	**89.60**	**88.55**	5
4381	M	0.00	**95.60**	**96.60**	2
2128	M	1.00	**88.60**	**83.20**	8
1015	F	1.00	**88.40**	**93.23**	8
1404	F	1.00	**94.40**	**96.50**	12
4385	F	1.00	**92.80**	**95.80**	1
3095	F	1.00	**91.20**	**92.84**	5
2129	F	1.00	**89.00**	**90.00**	8
1048	M	1.00	**94.36**	**96.36**	14
4068	F	1.00	**97.80**	**100.00**	19
4388	F	1.00	**83.80**	**84.20**	0
2130	F	1.00	**89.24**	**91.60**	6
4070	M	1.00	**73.00**	**74.60**	5
4140	M	1.00	**76.20**	**80.70**	9
4003	F	1.00	**82.40**	**87.00**	8
4397	M	0.00	**87.60**	**88.15**	8
4401	M	0.00	**91.20**	**85.42**	10

2131	M	1.00	**92.40**	**91.17**	7
4403	F	0.00	**88.00**	**88.17**	8
2133	M	1.00	**84.40**	**86.60**	11
2132	F	1.00	**95.60**	**97.40**	15
4406	F	0.00	**84.80**	**86.40**	6
2134	M	1.00	**92.20**	**93.80**	10
4407	M	0.00	**89.78**	**90.88**	6
2136	F	1.00	**82.36**	**83.98**	5
4408	F	0.00	**88.40**	**89.85**	9
4073	F	1.00	**93.42**	**93.40**	12
4072	M	1.00	**93.60**	**93.98**	9
4411	M	0.00	**87.80**	**85.80**	4
3017	M	1.00	**85.00**	**88.60**	9
1051	F	1.00	**91.28**	**89.47**	13
4082	M	1.00	**86.80**	**88.95**	8
4008	F	1.00	**83.00**	**84.40**	15
4421	M	0.00	**89.69**	**90.20**	7
4124	F	1.00	**85.60**	**87.57**	9
4143	F	1.00	**83.40**	**84.60**	10
2138	F	1.00	**96.80**	**98.00**	6
4427	F	0.00	**92.00**	**95.20**	20
4428	M	0.00	**87.40**	**91.60**	5
4086	M	1.00	**84.00**	**86.60**	10
4088	F	1.00	**82.00**	**88.00**	5
4087	M	1.00	**87.00**	**84.60**	8
4435	F	0.00	**94.60**	**96.28**	11
2140	F	1.00	**89.70**	**91.20**	14
4020	M	1.00	**85.60**	**85.80**	0
4444	M	0.00	**89.60**	**87.80**	4
4446	M	0.00	**91.20**	**89.91**	6
2142	M	1.00	**83.00**	**81.32**	12
2143	M	1.00	**78.20**	**78.80**	10
4448	M	0.00	**81.40**	**82.00**	10
1052	M	1.00	**83.42**	**83.20**	12
4450	F	0.00	**88.60**	**88.36**	2
2144	M	1.00	**92.20**	**92.80**	9
4451	F	0.00	**91.00**	**90.53**	15
2145	F	1.00	**86.80**	**80.20**	5
4015	M	1.00	**89.80**	**89.65**	18
4099	F	1.00	**85.20**	**88.25**	8
2146	F	1.00	**87.80**	**91.00**	12
2147	M	1.00	**77.40**	**81.33**	11
2148	F	1.00	**89.00**	**87.80**	17
1151	F	1.00	**82.40**	**84.33**	4
2149	M	1.00	**77.25**	**79.60**	8
4461	F	0.00	**94.60**	**94.20**	9
2155	F	1.00	**82.60**	**83.22**	13
2157	M	1.00	**86.60**	**86.60**	12

4476	F	0.00	**90.80**	**92.80**	20
4475	M	0.00	**94.40**	**94.90**	17
4019	M	1.00	**92.00**	**92.80**	13

Appendix D

Cohort 1: Extracurricular Frequency Table

Extracurricular Score[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.7	.7	.7
	1	1	.7	.7	1.4
	2	8	5.7	5.7	7.1
	3	2	1.4	1.4	8.5
	4	14	9.9	9.9	18.4
	5	8	5.7	5.7	24.1
	6	11	7.8	7.8	31.9
	7	11	7.8	7.8	39.7
	8	15	10.6	10.6	50.4
	9	11	7.8	7.8	58.2
	10	15	10.6	10.6	68.8
	11	6	4.3	4.3	73.0
	12	5	3.5	3.5	76.6
	13	7	5.0	5.0	81.6
	14	12	8.5	8.5	90.1
	15	5	3.5	3.5	93.6
	16	6	4.3	4.3	97.9
	19	3	2.1	2.1	100.0
	Total	141	100.0	100.0	

Appendix E

Cohort 2: Extracurricular Frequency Table

Extracurricular Score[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	1.4	1.4	1.4
	1	3	2.1	2.1	3.5
	2	4	2.8	2.8	6.4
	3	3	2.1	2.1	8.5
	4	5	3.5	3.5	12.1
	5	8	5.7	5.7	17.7
	6	12	8.5	8.5	26.2
	7	5	3.5	3.5	29.8
	8	15	10.6	10.6	40.4
	9	13	9.2	9.2	49.6
	10	15	10.6	10.6	60.3
	11	8	5.7	5.7	66.0
	12	12	8.5	8.5	74.5
	13	8	5.7	5.7	80.1
	14	8	5.7	5.7	85.8
	15	8	5.7	5.7	91.5
	16	1	.7	.7	92.2
	17	3	2.1	2.1	94.3
	18	3	2.1	2.1	96.5
	19	2	1.4	1.4	97.9
	20	3	2.1	2.1	100.0
	Total	141	100.0	100.0	