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A QUANTITATIVE STUDY ON THE EFFECTIVENESS OF A RURAL MAGNET
SCHOOL VERSUS AN URBAN SCHOOL MAGNET PROGRAM IN ACADEMIC
SUCCESS AND STAKEHOLDER SATISFACTION

By
Shayera L. Whitfield

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2020

Approval Page

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Acknowledgments

I will always give God the praise, glory, and honor for the many blessing he gives me. I thank him for giving me the strength, wisdom, perseverance, and knowledge to be able to start and ultimately finish this process. I am glad this journey was taken with him by my side. It has been a dream of mine to achieve my Doctorate in Education. A dream of this great importance cannot be realized without the support, encouragement, and understanding of so many people in my life.

To my best friend, my husband Shearton, thank you for your unwavering support, love, encouragement, and understanding of my desire to achieve this goal. Thank you for listening and always being there with a supportive word that made completing this dissertation happen. A great appreciation goes to my family members: my daughter Lindsey, sister Karen, nieces DeAndria and Kimberly for your prayers and understanding when I had to take time away from visiting with you to research and write. I would also like to thank my dog Graham for his comfort during this process, by just laying at my feet while I worked countless hours on this dissertation.

Also, I would like to give thanks to my school family for always checking on me, letting me know you care, and praying for me, as well as your encouraging words to keep me pushing forward to the end. To my doctoral colleagues, Lori Brewton and Traci Swilley, words cannot express how thankful I am for your help through conversations that guided me to have the never give up attitude when it came to me finishing this dissertation.

I wish to express my gratitude and appreciation to my chair, Dr. Steve Stone, for his willingness to be my chair as well as his belief and confidence in me as he walked me

through this dissertation process. I express a heartfelt thanks for your guidance, support, and professional advice while on this journey. I also would like to thank my other wonderful doctoral committee members, Dr. Franklin Foster and Dr. Erica Murdaugh, for giving of their time, input, support, and wisdom. I felt blessed and honored to have had such a wonderful committee to support me.

Abstract

A QUANTITATIVE STUDY ON THE EFFECTIVENESS OF A RURAL MAGNET SCHOOL VERSUS AN URBAN SCHOOL MAGNET PROGRAM IN ACADEMIC SUCCESS AND STAKEHOLDER SATISFACTION. Whitfield, Shayera L., 2020: Dissertation, Gardner-Webb University.

Research studies has indicated there is a correlation with magnet school curriculum being the cause of an increase in student achievement, high levels of student motivation, and satisfaction with morale as well as an increase in the number of parents satisfied with the school. However, according to Gamoran (1996), there have only been studies examining the academic achievement of magnet school students to non-magnet school students. This research study was designed to determine the effectiveness of a magnet school program in a rural and urban school district on the academic performance of students in reading and math as well as stakeholder levels of satisfaction with the learning environment. Examining the effectiveness of a magnet school program in a rural and urban school district would assist with determining if the academic performance of magnet school students were different. Also, the results of the survey completed by stakeholders on their satisfaction with the learning environment would assist with analyzing whether the satisfaction differ in rural and urban school districts. An analysis of the results of the study indicated that the academic achievement does not show a significant difference in reading and math of students who attend a magnet school in a rural or urban southern school district. Additionally, the results did show a substantial difference in the stakeholder satisfaction with the learning environment. Recommendations for future study were provided.

Keywords: magnet program, academic success, rural, urban, stakeholder, perception

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Chapter 1: Introduction

Since the passage of the Every Student Succeeds Act (ESSA) in 2016 and the political pressure to expand offer choice options in public schools, there has been an increase in the implementation in magnet schools in our nation. Educational leaders and politicians at the local, state, and national levels used the magnet school concept as the answer to urban reorganization, reform, and innovation (Blank & Archbald, 1998; Klauke 1988). Most importantly, leaders and politicians wanted the alternative concepts of magnet schools to be perceived by their constituents, as an established program, located in a neighborhood that is almost aligned with regular schools within a system. Klauke (1988) vividly described the concept of a magnet school as an innovative approach that should be viewed as a short-term initiative by parents, community, and staff.

Background

The focus of this research study is a school in a small southern rural school district located in the midlands with 2,900 students and 600 employees, with a motto of “Excellence Through Teamwork,” which was created by the superintendent. The school district is committed to providing learning opportunities that reach beyond the classroom and ensure every student a chance for success in a college and career. Before the arrival of the current superintendent in 2007, the district was faced with the state intervening because there were three schools in the district not making Adequate Yearly Progress (AYP) for the third consecutive year. The former superintendent decided to present to the South Carolina Department of Education an educational improvement plan of restructuring all three schools, and a school of choice was created. Currently, this choice school, which is a science, technology, engineering, arts, and math (STEAM) focus

school, has a student body of 250 students with 95% African American, 2% Caucasian, 2% Hispanic, and 1% other. For their students to be considered to attend this magnet school, parents must complete an application as well as meet other set guidelines for their student's name to be placed in the lottery for consideration for admission to the magnet school. The other choice schools in this research study are in southern school districts in the upstate and low country of the south.

The STEAM choice school has been the highest academic performing school in the district since 2010. Palmetto Gold and Palmetto Silver academic achievement awards were achieved each year. These awards are given to schools whose students have scored among the highest in the state on the end of the year state assessment in English, math, science, and social studies. The students and faculty were awarded the prestigious Palmetto's Finest award in 2014 as one of the top schools in the state. The awards are given for academic success displayed by students as well and the hard work of the faculty and staff.

Magnet schools' preeminent model of education has been used for decades. These schools are often looked upon as the best schools in a school district because the school offers specialized programs and a curriculum that attracts students who do not reside in the school's attendance zone. Magnet schools started as a traditional neighborhood public school with goals that would provide an opportunity to change how the school operated in hopes of increasing student diversity and achievement (Magnet Schools of America, 2014). It is not often that anyone evaluates if the magnet school's distinctive curriculum and the instructional approach are effectively aligned to what research indicates as the components identified as an academically successful magnet

program and are achieving the goals set by policymakers and educators. Higher performance in academics at a more rigorous level was the expectation for students attending magnet schools than students who attended a traditional public school. Kelly Burcherie, the Magnet School of America's Director of Magnet School Leadership, said magnet schools offer a unique opportunity for students whose traditional neighborhood school does not offer the engagement they need (Curran, 2019). "Traditional schools are great for a lot of students, but magnet schools offer the theme-based education that is really hooking them, engaging them, getting them to want to go to school every day" (Curran, 2019, p. 6). Burcherie said Wake Forest, North Carolina based mom, Heather Frese searched for the best school when it was time for her son to start kindergarten because "she wanted to set her kid up for the best education possible, and for her, that meant looking beyond his assigned school to the local magnet programs" (Curran, 2019, para. 1).

Magnet school children are often comfortable with everyone knowing that they attend a magnet school. Students attending magnet schools achieve greater academic success than students who attend traditional schools in the same school district (Chen, 2018). However, feelings of unease could arise when comments are overheard from other students and adults about the students being the smartest and their intelligence being the reason they take top honors in district competitions, which is not always the outcome. Evaluations of magnet schools have suffered from methodological limitations. According to Poppell and Hague (2001), some merely compare the achievement of magnet and non-magnet students without controls for initial differences in achievement.

Purpose of the Study

This study will help determine how students in grades 3-5 attending a magnet school in a small rural southern school district achieve results differ on the South Carolina Readiness Test (SCReady) in reading compared to students in another rural and an urban magnet school or how students in grades 3-5 attending a magnet school in a rural small southern school district achieve results differ on the SCReady in math compared to students in another southern rural and an urban magnet school. This study will also attempt to examine how stakeholders results with the satisfaction with the learning environment differ in rural and urban school districts.

Theoretical Framework

Children were taught at home by their parents before there was an option of sending students to a public school. The establishment of the first public school by the Puritans was for children to be taught the core values as well as the basics of reading, writing, and math. However, at this time, Chen (2018) noted that for almost 100 years, the public system was ignored.

The first public schools began to appear in 1840 in a few communities of those who could afford the schools. Also, during this time, Horace Mann and Henry Barnard of Connecticut, education crusaders, argued that this was not good enough and began demanding free education for all people. In Massachusetts, the first school law was passed to make sure all children, especially those of poor immigrants, get an opportunity to learn obedience and restraints to be good workers. Also, during this time, African American representatives Robert Smalls and Joseph Hayne Rainey demanded free public education be brought to the south where free public education was not provided

(Historical Timeline on Public Education, 2006). As early as the 1900s, all American children were required to attend an elementary school, even though a racially segregated school system existed despite *Brown v. The Board* Supreme Court ruling. However, by the 1970s, segregated schooling in the United States was eliminated (Chen, 2018).

Public schools today look much different than one-room schoolhouses of the 19th century. The public schools are overseen by state departments of education, local school districts, and locally elected school board members. The school district is responsible for providing public elementary and secondary education to all students in their area. Students typically attend the school in their attendance area, but open enrollment is allowed in other schools, such as a public magnet school within the district provided space is available (Chen, 2018).

In the 1980s, public charter schools became a focus first in Minnesota and later in other states. The public charter school, where new pedagogical approaches could be tried, was the brainchild of teacher unions spearheaded by Robert Shaker, president of the American Federation of Teachers. The teachers were allowed to have more freedom in using their teaching strategies and curriculum accepting higher accountability for their students' achievement. Utilizing funding given to them by President George Bush and President Barack Obama, leaders of the charter schools were able to renovate, lease, or buy facilities as well as capitalize on the Race to the Top program initiated by President Obama, which provided means of transforming underperforming public schools into charters (Chen, 2018).

The idea of school choice emerged in the 1950s when Milton Friedman introduced the concept of free-market principals to improve the United States public

school system. He proposed that parents receive education funds in the form of vouchers, which would allow them to choose their children's schools, including both public and private, religious, and non-religious (Fuller, Elmore, & Orfield, 1996). People often use school choice to indistinctively compare public and private schooling through the use of vouchers that provide government funding that can be applied to private school tuition. The opportunity to use vouchers leads to people using choice schools as a means for the comparison of public and private schooling. In the south, the choice was embraced for a time as a way to undermine and avoid desegregation (Reardon & Owens, 2014).

Conservatives in the 1980s wanted to use school choice as an option that would provide educational opportunities that reflected their political values and culture (Fuller et al., 1996; Henig, 1990). Also, the choice was supported by other groups as a way to empower the working class, as a means of expressing the need for improving school quality, and as a positive tool to desegregate schools (Henig 1990; Moore & Davenport, 1989). Allowing families to have school choice will enable them to select from a variety of available schools, including traditional public education and selected magnet schools.

Coleman (1966) stressed that socially disadvantaged Black students who were bused to primarily White schools benefited from learning in mixed-race classrooms. He also found that schools that educated predominantly Black students were not significantly underfunded compared to schools that educated White students in the south, hence alluding that providing funding to achieve racial equality was not necessary, but providing transportation for students to attend a more racially balanced school could impact their learning (Coleman, 1966).

Minority isolation and racial balance in the 1970s was addressed by creating

magnet schools. According to the United States Department of Education (2004a), magnet schools “serve a purpose to assist in the desegregation of schools served by local educational agencies by providing financial assistance to eligible local educational agencies” (part C, para. 1). These funds help magnet schools improve struggling schools, reduce the minority isolation of students, implement programs, develop innovative educational methods, and create other accountability measures (U.S. Department of Education, 2004a). Magnet schools’ offering of a unique curriculum capable of attracting substantial numbers of students of different racial backgrounds was an attempt to desegregate public schools.

The idea of starting magnet schools came from the success of other schools that offered advanced instruction in specific areas and were available to students from outside the neighborhood in which they were located, such as Lane Tech and Boston Latin in Chicago (Blank, 1989a). The assumption was that by attracting students with different backgrounds and ability levels, but with similar interests from across a wide geographical area, it would create schools with a racially diverse student body (Blank, 1989a). Magnet schools offered programs that were specialized, varied, and included innovative pedagogy, college-preparatory-focused curriculum, vocational training, performing and visual arts, and school-wide themes to unify learning. The goal of magnet schools was to achieve integration while offering different curricular programs in hopes that this positive impact on students would encourage them to stay in school and attain higher levels of education than students who did not benefit from special programs (West, 1994).

Magnet schools first emerged as a movement in the early 20th century, and during this time, districts established competitive-admission magnet schools to provide a

rigorous curriculum for the highest achieving students (Finn & Hockett, 2012; Steel & Levine, 1994). The three primary goals of the magnet schools were to provide innovative educational programming, attract students from across school districts, and assist with desegregation. Research evaluating the implementation of magnet schools discovered that they did effectively desegregate schools (Arcia, 2006; Steel & Levine, 1994).

Districts created more magnet schools in the 1960s and 1970s to encourage parents to keep their children in the district's public school choice with the offer of a rigorous curriculum for the highest achieving students and to promote their desegregation plan (Arcia, 2006; Kozol, 1992; Varady, 1995). Currently, in the United States, there are approximately 2,700 magnet schools, which is less than 3% of all schools (Keaton, 2012). Most magnet schools were developed first in large urban school districts seeking to reduce racial isolation in their schools by providing parents the opportunity to volunteer rather than pose a mandatory student assignment. The educational programs at these magnet schools were modeled on well-established specialty schools that offered advanced programs to selected students, such as Bronx School of Science, Boston Latin School, and Lane Tech in Chicago. The curricular programs of the first magnet schools mirrored specialty school themes such as mathematics, science, and the performing arts. The magnet school programs were designed to be different in one significant way; magnet school enrollment was driven by student choice based on interest rather than the selection of students by testing (Innovations in Education: Creating Successful Magnet Schools Programs, 2004).

A significant concept of the creation of magnet schools was the opportunity to attract a diverse group of students by finding a unifying theme or organizational structure

for students of similar interests; each student will excel in all areas of the curriculum (Waldrip, 2002).

The passing of the No Child Left Behind Act (NCLB) of 2001, an extension and revision of the Elementary and Secondary Education Act (ESEA) of 1965, ensured a difference in academic performance in reading, writing, and mathematics would not be as noticeable in children attending urban or rural schools due to the low social-economic status of their parents compared to children attending suburban schools whose parents were considered middle class (Farkas & Hall, 2000). ESEA emphasized equal access, high standards, and accountability. NCLB placed responsibilities on schools that they had to achieve a predetermined improvement in the performance of different groups of students on end-of-year district or state tests. Schools were also required to inform parents of the school's performance as well as provide an explanation of the terms and statistics accompanying the school report card. An important section of NCLB requires states to ensure that students in grades 3-8 be tested in reading and mathematics and again once in high school. The testing results had to be reported for the student population and subgroups of students, such as English learners (ELs), students in special education, racial minorities, and children from low-income families (U.S. Department of Education, 2002).

NCLB monitored schools to make sure they were continuously moving towards their goals through a mechanism known as AYP. AYP measured the performance growth, which is determined by each state and is a requirement for schools that receive Title I funds (South Carolina Department of Education, 2018a). If a school misses its state's annual achievement targets for 2 years or more, either for all students or for a

particular subgroup, it is identified as not making AYP and is subject to a cascade of increasingly severe sanctions. For example,

1. Schools that miss AYP 2 years in a row must allow students to transfer to a better performing public school in the same district.
2. Schools that miss AYP for 3 years in a row must offer free tutoring.
3. Schools that continue to miss achievement targets could face state intervention. States can choose to shut these schools down, turn them into charter schools, take them over, or use another significant turnaround strategy.
4. Schools that do not make AYP have to set aside a portion of their federal Title I dollars for tutoring and school choice. Schools at the point of having to offer school choice must hold back 10% of their Title I money (U.S. Department of Education, 2008b).

NCLB was replaced with ESSA; and on August 1, 2016, the regulation that requires states to monitor schools and districts by AYP expired. Section 1111 of ESSA outlines the federal accountability requirements for South Carolina's accountability system and report card. South Carolina's accountability systems are designed to address the requirements for academic achievement, student growth, progress in achieving English language proficiency, and at least one indicator of school quality or student success (South Carolina Department of Education, 2018a).

Parents who decide for their child to participate in the school choice process decide for widely diverse reasons. For instance, low-income parents may need support to understand the process and what the schools have to offer. Low- and high-income parents both select schools based on school quality, but they use various measures of

quality, according to a new study on school choice in the journal *Educational Evaluation and Policy Analysis* (Sparks, 2017). The responsibility lies with each family to determine whether the level of academic growth makes a school more appropriate for their child. Districts often resort to creating a magnet school in the hope of creating a more diverse population when a lack of choice by parents to achieve racial balance occurs or leaves schools under capacity (Rossell, 2002).

The schools have the flexibility to promote an innovative curriculum; however, many parents choose a school based on a specific theme or program that allows students the opportunity to spark their passion. A few themes offered include academic acceleration, problem-based learning, global exploration, technology, arts and music, writing and publishing, and math and science. The National Center for Education Statistics study showed that the most popular magnet school is one that is a dedicated magnet, meaning that all students attending the school are there by choice, and no one is assigned by default based on their address (Rossell, 2005). In dedicated magnet schools, a unique atmosphere is offered by removing the population from a residential boundary that may distort parent perceptions of the demographics or academic performance of the school (Rossell, 2005).

Low-performing neighborhood schools that are serving students from low-income households or minority racial/ethnic groups should take the approach of converting to a magnet school and adopt a specialized curriculum or instructional method. This change may enable the school to attract students of racial or ethnic groups different from the students who live in the school's neighborhood or attendance zone as well as students who are more economically advantaged or higher achieving (Betts, Kitmitto, & Levin,

2015).

Both groups of students, the new students attracted to the school from outside the neighborhood and the neighborhood students, could benefit from the school's specialized curriculum or instructional method. According to Christenson et al. (2003), if the recruitment of new students is successful, the hypothesis is that there will be a "spillover" effect. The higher achieving students from outside the neighborhood will contribute to higher teacher expectations. The higher expectations, combined with the new students' presumed stronger academic motivation, will lead to improvements in the behavior and achievement of the neighborhood students (Christenson et al., 2003). Also, more economically advantaged students might bring with them parents who can more effectively advocate for ongoing improvements in the converted schools (Baker & Stevenson, 1987). The ethnic or racial diversity of students from outside the neighborhood could ultimately support student learning by exposing all students in the school to inclusive life experiences and opinions than they would otherwise have encountered (Harris & Jones, 2010). The primary goal of the traditional magnet school is to improve the outcomes of the neighborhood students who attend the low-performing school. Students who are from low-income households and low achievers in school are usually the focus of most federal policy concerns. The expectations are that the students will benefit from the match between a school's specialized curriculum and instruction and their interests as well as from the improved learning environment in the magnet school.

According to "Integrated Magnet School: Outcome and Best Practices" by the Institution on Metropolitan Opportunity, University of Minnesota Law School, despite

their original purpose, magnet schools have, over the years, shifted away from desegregating school districts (Frankenberg & Siegel-Hawley, 2008, p. 1). As early as 1983, the Department of Education found that 60% of magnet schools studied were fully desegregated. As of 2003, the Department of Education reported that only “57% of newly founded magnet programs were making progress in combating racial isolation, while another 43% were experiencing an increase in segregation” (Frankenberg & Siegel-Hawley, 2008, p. 1). Nonetheless, “students participating in magnets are more likely to come from backgrounds where parents were more organized and tended to be highly motivated to find high-quality opportunities for their children, even if they did not necessarily have more financial resources” (Frankenberg & Siegel-Hawley, 2008, p. 1). Some magnet schools, therefore, are still committed to desegregation (Frankenberg & Siegel-Hawley, 2008). “Parental choice, in part, may be due to student achievement as the selection of a magnet school also indicates parental involvement, which has a positive influence on the child’s learning” (Beverly, 2009, p. 28).

As stated by Waldrup (2002), Magnet Schools of America specified the purpose of a magnet school is to increase the diversity of the student population. The United States federal government in 2012 spent over \$96 million on magnet school program funding under ESEA Title V (U.S. Department of Education, 2011).

Problem Statement

The problem examined is the academic achievement of students attending a choice magnet school in a rural school district compared to students attending a magnet school in another rural and an urban school district. This problem exists because there is no research available that examines the academic performance of magnet school students

to other magnet school students. Research only indicates that “magnet and non-magnet students’ achievement is compared without controls for initial differences in achievement” (Poppell & Hague, 2001, p. 17). The benefits of this study will provide comparison reading and math achievement data of students in this unique magnet school located in a small rural southern school district with reading and math achievement data of other students in another magnet school in a rural and an urban school district in the south. The opportunity to examine the students’ reading and math state test scores compared to other magnet or choice schools will assist with validating the school’s ranking among the top 20% of schools in South Carolina that received an “excellent” according to the 2017-2018 and 2018-2019 state assessment results (South Carolina Department of Education, 2018c).

Overall, evaluations of magnet schools have suffered due to limited studies of magnet school students’ academic performance compared to other magnet school students’ academic performance. “Some merely compare the achievement of a magnet and non-magnet students without controls for initial differences in achievement” (Poppell & Hague, 2001, p. 17). Gamoran (1996), when he began the study, speculated that student achievement would be higher in magnet schools than in comprehensive public schools. His reason for this speculation was that students would form social relationships around the magnet schools’ specific aims and that this would lead to better academic experiences. He was right about the achievement differences; he found that students in magnet schools did score higher on science, reading, and social studies tests than students in comprehensive public schools. He was wrong, however, about the reasons for these higher scores (Gamoran, 1996). A research paper revealed studies to date had evaluated

the achievement effects of the Milwaukee Parental Choice Program. The first, conducted by Witte, Sterr, and Thorn (1995), concluded that choice students showed no relative achievement gains. The second, by Greene, Peterson, and Du (1997), found that by the third and fourth years in the program, their choice students made statistically significant test score gains in both reading and math. The third study, by Rouse (forthcoming), reported that significantly faster gains in math scores were shown, but no differential gains in reading by the students selected to experience attending a choice school. To get a better understanding of why these three studies generated conflicting results, two aspects of the evaluations were studied: the selection of the control, or comparison group, and the method of controlling for family background and student ability (Rouse, 1998).

An evaluation conducted by the American Institutes for Research evaluating a federal program found that academic progress in magnet schools was no more significant than in a comparison set of regular public schools, once controls were introduced for changes in the demographic composition of schools (Christenson et al., 2003). The study used school-level data rather than longitudinal student-level records. Also, frequent changes to the state's system of testing made it difficult to acquire the necessary test scores for one third to one half of the schools in the study.

The Public-School Review website contains research on rankings of magnet schools in South Carolina. It provides academic achievement on magnet elementary, middle, and high schools based on end-of-year test scores, key statistics, and ratings. Each district that has a magnet school provides specific information about the school and the procedures for a student to attend the school. For example, Greenville County School District's (2019) website contains information about their magnet academies. The

academic program of each magnet academy offers a theme or focus that is designed to provide students an opportunity to explore a particular interest, gift, talent, or skill. These schools attract top students and talented teachers who bring innovative ideas to the classroom. Teachers are chosen based on their academic preparation, professional experience, and specialized skills (Greenville County School District, 2019). Specific information about achievement comparison to other magnet schools was not available. Magnet schools in the local area are compared to non-magnet schools' academic achievement.

The research of study was selected to examine the effect of the academic achievement of students attending a choice magnet school in a rural school district compared to students attending a magnet school in another rural and an urban school district. This research study is seeking to determine how the academic performance on the state assessment of students in grades 3-5 attending a magnet school in a small rural southern district is different than students in grades 3-5 attending a magnet school in another small rural and an urban southern school district. Also, this study will attempt to examine how stakeholders results with the satisfaction with the learning environment differ in rural and urban school districts. The findings may be of interest to those working in a magnet school and the parents of students attending a magnet school. Administrators of these students might also find the body of research useful for setting measurable goals for the students, which are attainable at their level.

Research Questions

1. How does reading achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?

2. How does math achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?
3. How does stakeholder satisfaction differ in rural magnet schools compared to urban magnet schools?

Audience

The intended audience for this research study to examine the effect of the academic achievement of students attending a choice magnet school in a rural and an urban school district will be members of the participating schools' district superintendents, principals, teachers, parents, and the State Department of Education committee. These educators will be able to use the results as a means of validating or invalidating the academic achievement of students attending their magnet school.

Purpose of the Study

The purpose of this study is to determine how students in grades 3-5 attending a magnet school in a small rural southern school district achieve different results on the South Carolina Readiness Test (SCReady) in reading compared to students in another rural and an urban magnet school or how students in grades 3-5 attending a magnet school in a rural small southern school district achieve different results on the SCReady in math compared to students in another southern rural and an urban magnet school. This study will also attempt to examine how stakeholders results with the satisfaction with the learning environment differ in rural and urban school districts. Studies exist about magnet schools' academic achievement on state assessments compared to non-magnet schools' academic performance; there is little research on the comparison of magnet schools to other magnet schools' academic success. Three research questions were

composed for this study. Two questions relate to the comparison of the academic performance in math and reading of students attending a school in a rural and an urban school district. The third question determines if teacher survey results indicate whether they were more or less satisfied with the learning, social, and physical environment as well as the relationship between school and home than teachers in another rural and an urban magnet school. The researcher examined if the academic achievement results of students in the rural magnet school in a southern school district are higher, the same, or lower than students in another rural and urban schools. The researcher determined if survey results indicated if stakeholders were more or less satisfied with the learning environment in a rural and an urban magnet school district as it relates to the effects it has on student academic achievement than stakeholders in an urban school district. The findings and conclusion will provide the knowledge for understanding the effectiveness of academic achievement for students who attend a magnet school in a rural or urban school district.

Assumptions

A key assumption of the school choice theory was that poor and minority children are more likely to be trapped in inferior schools than are non-poor and non-minority children (Archbald, 2004). Parents and some communities think that just because a school has been given the magnet status that the school must be the best in the district. Colleagues of teachers and administrators of non-magnet schools believe that the teachers of magnet school students have the best students in the district, and their efforts to prepare the students for academic success do not have to be as demanding, but these thoughts are not valid. Students are held to a higher academic standard by the teachers,

parents, and administration if they attend a magnet school. Teachers must ensure the students are prepared academically through their teaching practices to ensure academic success for students. The assumption is also made that student scores on the state assessment will always be the highest compared to non-magnet schools.

Limitations

The limitations of this study on the effects of academic achievement of a magnet school program in a rural school district and future results are limited to the sample size of only three schools from a southern school district. The data collected were obtained from a limited number of magnet schools in a rural and urban district. Because the results are limited to rural and urban magnet schools, there is no extension of research findings or conclusions from the study conducted on the sample population. The curriculum and teaching methods or strategies may have an impact on students retaining information and their performance on the state assessment, as well as other outside variables such as family income, parental involvement, single-parent homes, or many other factors that may affect student achievement; but those variables are not factored into this study. Schools selected in the study for comparison may have a different variation of the makeup of their magnet school, which could affect the results on the state assessment. This study did not attempt to control these variables. However, the findings are transferable and can be useful in another context.

Delimitations

This study primarily focuses on the effects of the academic achievement of magnet school programs in a rural and urban school district. The scope of the study was

restricted; non-magnet schools were excluded from the study. Attaining non-magnet schools' data will go beyond the scope of the study. The researcher's focus on only the limited number of magnet schools in a rural and urban district helped to answer the research questions that pertain to academic achievement in rural and urban magnet schools. There will be future considerations to study the effects of academic achievement on magnet and non-magnet schools in rural and urban southern districts.

Significance of the Study

This quantitative study seeks to offer information on the academic achievement of students who attend a rural magnet school compared to other students attending magnet schools in another rural and urban district. The academic performance of children attending a magnet school in rural districts has been only compared to non-magnet schools. As a result of this comparison, speculations from teachers, parents, and students as it relates to academic achievement on state assessment is unfair. Magnet schools for reasons unknown have needed to provide evidence of their worth. The opportunity to provide such proof of student achievement in rural and urban magnet schools through data collection will show the effectiveness of academic achievement in magnet schools. This study should be of great interest to educators, administrators, parents, and state educational leaders. The data used in this research study are from each school's annual report card. The focus is on the academic achievement of students in rural and urban school districts in different areas in the state. The findings may be of interest to those working in the school, State Department of Education leaders, superintendents, and principals. Teachers of these students might also find the body of research useful in their preparation for daily instruction and with setting goals for these students which are

attainable at their level. Further, the data may help shape the development of new magnet schools in their efforts to create a thriving learning environment that focuses on high academic achievement for all students.

Summary

It may appear as if magnet schools are the elite schools in a school district because they offer special programs or curriculum that attract students from other neighborhoods. Rarely does anyone evaluate if the magnet school's distinctive curriculum and instructional approach contribute to the students' successful academic achievement and if that achievement is comparative to other magnet schools. Children attending magnet schools are often comfortable in everyone knowing they attend a magnet school, and they pride themselves on their success but can have feelings of unease when non-magnet students, their parents, and even teachers make unnecessary comments about their academic ability. The purpose of this study was to determine how the academic achievement results on the state assessment of students who attend a magnet school in a rural school district differ from students in another rural and an urban school in South Carolina. This study will show that there is a difference in the demographics and enrollment of students attending magnet schools in this study. Determining whether the enrollment, demographics of a school, or parent involvement affect the findings will not be a factor in this study. This study will also attempt to examine how stakeholders results with the satisfaction with the learning environment differ in rural and urban school districts.

Definitions of Terms

Academic growth. Academic progress made over a period of time, as measured from the beginning to the end of the defined period.

Accountability. An accountability standard by which schools are evaluated based on student growth and performance. Growth is projected based on the previous achievement of the students in the sample.

Achievement. Something accomplished, especially by superior ability, special effort, great courage, etc.; a great or heroic deed.

Adequate yearly progress (AYP). A set of performance targets that subgroups must achieve each year to meet the requirements of NCLB. This target was the same for all subgroups in terms of performance until 2011.

Academic growth. The difference, positive or negative, in test scores from one year to the next on SCReady tests.

Comprehensive data. A formal data definition that provides a complete, meaningful, easily read, readily understood definition explaining the content and meaning of data.

Controlled choice. A comprehensive, transparent, educationally sound and equity-driven universal choice-based methodology for assigning students to public schools that consciously promote diversity in a manner that is family friendly and fair to all students and practicable to implement.

Elementary and Secondary Education Act (ESEA). The Act of 1965, currently known as NCLB, challenges states and school districts to increase efforts to improve student academic achievement. Its accountability provisions focus attention on low-

performing groups of students, intending to close the achievement gap.

Every Student Succeeds Act (ESSA). The nation's main education law for all public schools. The law holds schools accountable for how students learn and achieve. ESSA aims to provide an equal opportunity for students who get special education services.

Ethnic group. A community or population made up of people who share a common cultural background or descent.

Grade point average (GPA). The measurement of a student's academic achievement, which is calculated by dividing the total number of grade points received by the total number attempted.

Magnet school. A school that offers a specific program, using funds supplied by the local education agency, grants, or other sources, to attract students to eliminate, reduce, or prevent racial isolation.

Magnet school program. A strategy that promotes a specialized curriculum designed for attracting students of different racial backgrounds.

Nation at Risk. The Imperative for Educational Reform is the title of the 1983 report of American President Ronald Reagan's National Commission on Excellence in Education.

Non-magnet. The zoned school in which the student is assigned. This assignment may be because the student is residential to that school or the parent made a choice.

No Child Left Behind (NCLB). NCLB was a U.S. Act of Congress that reauthorized ESEA; it included Title I provisions applying to disadvantaged students.

NCLB required states to develop assessments in basic skills.

Racial. Relating to race.

Racial equality. This occurs when institutions give equal opportunity to people of all races. In other words, institutions ignore a person's racial, physical traits or skin color, and give everyone legally, morally, and politically equal opportunity.

Restructuring. A reorganization of a company to achieve greater efficiency and profit or to adapt to a changing market.

Rural. Relating to or characteristic of the countryside rather than the town.

School choice. A process through which parents in a school district may request for their child to attend another public school in the district, either in or out of the zone, other than his or her residential school. If no choice is made to attend a magnet school or school within the area, the student is assigned by default to his/her residential school.

Social disadvantage. When an individual has been subjected to racial or ethnic prejudice or cultural bias within American society because of their identities as members of groups and without regard to their individual qualities.

South Carolina Department of Education. The state education agency of South Carolina.

STEAM. An educational approach to learning that uses science, technology, engineering, the arts, and mathematics as access points for guiding student inquiry, dialogue, and critical thinking.

Subgroup. A category of students identified by ethnicity, ESE, English proficiency, or educational exceptionality.

Traditional school. Public schools, divided into grades and governed by school

districts. These schools are where most children get their primary and secondary education.

Title I funds. The Title I, Part A Schoolwide Program Plan Requirements and Rubric is designed to ensure a schoolwide plan is fully developed according to the requirements in section 1114 of Title I, Part A of ESSA.

Urban. Relating to or constituting a city.

Value added. A method of teacher evaluation that measures the teacher's contribution in a given year by comparing the current test scores of their students to the scores of those same students in previous school years.

Chapter 2: Literature Review

Overview

The purpose of this research study is to determine how students in grades 3-5 attending a magnet school in a small rural southern school district achieve results differ on the South Carolina Readiness Test (SCReady) in reading compared to students in another rural and an urban magnet school or how students in grades 3-5 attending a magnet school in a rural small southern school district achieve results differ on the SCReady in math compared to students in another southern rural and an urban magnet school. This study will also attempt to determine how does stakeholders results with the satisfaction with the learning environment differ in rural and urban school districts. To address two of the research questions on academic performance in reading and math, additional research was conducted and literature reviewed to acquire information on the history of the problem. The research related to the problem examined if the academic achievement of students attending a choice magnet school in a rural school district compared to students attending a magnet school in another rural and urban school revealed higher academic results. Not included in this study are academic achievement results of children attending non-magnet schools.

Historical Background

The idea of a magnet school came at a time of racial unrest across the United States in the late 1600s. The racial segregation of students in public schools over the years eventually led to peaceful solutions to desegregate schools and the establishment of magnet schools in some school districts. Districts are establishing competitive-admission magnet schools to provide a rigorous curriculum for the highest achieving students (Finn

& Hockett, 2012; Steel & Levine, 1994). The main purpose of the creation of magnet schools was to offer parents and students an alternative education focused on an area of interest that will draw students from a variety of school districts. Students were to come together by their shared educational goals, resulting in voluntarily desegregation. Nowadays, magnet schools have been said to be racially and economically diverse, promote academic excellence, and offer curricular or instructional innovation and opportunities to lure in students. Students interested in their studies while exposing them to more diversity will improve academic performance. Since the late 1960s, magnet schools have played an important role in the reform process in American education because of the prospect of decreasing segregation processes, and increasing opportunities and choices for all students, and more specifically, minority students. With this reform effort, magnet schools now hold a preeminent place in the history of education reform in the United States.

After conducting thorough research, the problem that exists for this study is there has never been a research study conducted on comparing the effectiveness of academic performance in reading and math on a state assessment of students attending a magnet school in a rural school district to students attending a magnet school in an urban district. Poppell and Hague (2001) claimed that while magnet programs may be achieving their goal of diversifying the population, researchers often fail to fully assess the fidelity of a magnet school. They do not identify whether magnet schools are showing that they produce a higher level of academic achievement than schools without such programs. Their study of magnet schools described and evaluated only the implementation of the program itself and not the actual results associated with student achievement.

Gamoran (1996), when he began the study, speculated that student achievement would be higher in magnet schools than in comprehensive public schools. He reasoned that students would form social relationships around the magnet schools' specific aims and that this would lead to better academic experiences. He was right about the achievement differences; he found that students in magnet schools did score higher on science, reading, and social studies tests than students in comprehensive public schools. He was wrong, however, about the reasons for these higher scores (Gamoran, 1996).

A research paper revealed that three studies to date evaluated the achievement effects of the Milwaukee Parental Choice Program. The first study, conducted by Witte et al. (1995), concluded that there were no relative achievement gains among the choice students. The second study, by Greene et al. (1997), found that the choice students made statistically significant test score gains in both reading and math by their third and fourth years in the program. The third study, by Rouse (1998), reported that the students selected to attend a choice school experienced significantly faster gains in math scores but showed no differential gains in reading. To understand the reason these three studies generated conflicting results, two aspects of the evaluations must be taken into consideration: the selection of the control, or comparison group, and the method of controlling for family background and student ability.

The evaluation of magnet schools in a rural and an urban school district in South Carolina uses the same measurement assessed by the South Carolina Department of Education. The comparison has always been of magnet and non-magnet schools with similar students, which could be determined by the economic status of the students attending the school reported by the school district. For example, end-of-the-year state

assessment scores of students attending Title I schools are compared to the scores of Title I students in another district with regard to the number of students tested in that school. There has never been a study conducted on comparing the academic achievement of students in a rural magnet school to another group of students in an urban magnet school district.

Research Related to the Problem

Children were taught at home by their parents before there was an option of sending students to a public school. The establishment of the first public school by the Puritans was for children to be taught the core values as well as the basics of reading, writing, and math. However, at this time, “A public education system still exists today and how we got to the current point in public education warrants a look back at the very first school dedicated to educating American youth” (Chen, 2018, para. 1).

The first public schools began to appear in 1840 in a few communities of those who could afford the schools. Also, during this time, Horace Mann and Henry Barnard of Connecticut, education crusaders, argued that this was not good enough and began demanding free education for all people. In Massachusetts, the first school law was passed to make sure that all children, especially those of poor immigrants, got an opportunity to learn obedience and restraints to be good workers. Also, during this time, African American representatives Robert Smalls and Joseph Hayne Rainey demanded free public education be brought to the south where free public education was not provided. As early as the 1900s, all American children were required to attend an elementary school, even though a racially segregated school system existed despite the *Brown v. The Board* Supreme Court ruling. However, by the 1970s, segregated

schooling in the United States was eliminated (Chen, 2018).

Public schools today look much different than one-room schoolhouses of the 19th century. The public schools are overseen by state departments of education, local school districts, and locally elected school board members. The school district is responsible for providing public elementary and secondary education to all students in their area.

Students typically attend the school in their attendance area, but open enrollment is allowed in other schools, such as a public magnet school within the district provided space is available (Chen, 2018).

In the 1980s, public charter schools became a focus first in Minnesota and later in other states. The public charter school, where new pedagogical approaches could be tried, was the brainchild of teacher unions spearheaded by Robert Shaker, president of the American Federation of Teachers. The teachers were allowed to have more freedom in using their teaching strategies and curriculum accepting higher accountability for their students' achievement. Utilizing the funding given to them by President George Bush and President Barack Obama, leaders of the charter schools were able to renovate, lease, or buy facilities as well as capitalize on the Race to the Top program initiated by President Obama, which provided means of transforming underperforming public schools into charters (Chen, 2018).

The idea of school choice emerged in the 1950s when Milton Friedman introduced the concept of free-market principals to improve the United States public school system. He proposed that parents receive education funds in the form of vouchers, which would allow them to choose their children's schools, including both public and private, religious, and non-religious (Fuller et al., 1996). People often use school choice

to indistinctively compare public and private schooling through the use of vouchers that provide government funding that can be applied to private school tuition. This leads to choice schools being a means for the comparison of public and private schooling. In the south, the choice was embraced for a time as a way to undermine and avoid desegregation (Reardon & Owens, 2014).

Also, choice was supported by other groups as a way to empower the working class, as a means of expressing the need for improving school quality, and as a positive tool to desegregate schools (Henig, 1990; Moore & Davenport, 1989).

According to Fuller et al. (1996), “it was during the Kennedy and Johnson era when vouchers emerged with the expectation that families are rational decision-makers and from a rejection of the assumption that the government can provide the quality educational product” (p. 19). In the south, to avoid and undermine desegregation, choice was embraced (Reardon & Owens, 2014); and in the 1980s, conservatives wanted to use school choice to provide educational opportunities that reflected their cultural and political values (Fuller et al., 1996; Henig, 1990). School choice provided families with an option to select from a variety of available schools, including traditional public education. Their choice schools can sometimes include private schools, but the alternative is to enroll in any of the public schools in a district. During this time, magnet schools were selected by families, because they were considered a type of choice school, and the school’s ability to produce the results desired and benefits of magnet school attendance may apply to choice schools. Schwalbach (2019) stated that school choice is a growing movement that is lifting thousands of kids across America. The results are tangible, and some states are leading the way by giving parents more options in their

children's education than ever before. He listed the 10 most promising benefits of school choice:

1. School choice is good for student safety.
2. School choice increases parental satisfaction and involvement.
3. Education choice can give students an education tailored to their needs.
4. School choice provides options for low-income families.
5. School choice leads to higher graduation rates.
6. School choice saves taxpayer dollars.
7. School choice puts competitive pressure on schools.
8. School choice makes schools more accountable.
9. School choice makes education dollars go further.
10. School choice helps cultivate citizens.

During the presidency of Ronald Regan, *A Nation at Risk* was published (National Commission on Excellence in Education, 1983), which brought attention to the status of public education and thus began competition by applying business principles. This action indicated that there were concerns about the quality of public education, especially in schools attended by minority and low-income students, which generated a demand for immediate education reform. Following this report, education was fully engaged in the accountability era. Congress's only decision was to reframe the national education debate and put the focus on national funding priorities surrounding public education. The decision to have national funding priorities that focused on public education was framed as the most overall increase in federal involvement in public K-12 education since the launching of Sputnik by the Soviet Union in October of 1957

(Johanningmeier, 2010, p. 348). On the report from the Congressional Research Service (1993), some of the stated goals of the 1994 reauthorization of ESEA were that all children in America should begin school with the ability to read and write. The report also included the following statement:

Finally, we have seen in recent years the emergence of a potential new Federal role. This would involve the establishment of national curriculum standards, and State or regional assessments based on these, through organizations and processes that are supported by the Federal Government, although not governed or substantially controlled by it. (Congressional Research Service, 1993, p. 6)

The accountability for public school has led to an ongoing discussion concerning the most efficient manner to increase American students' reading and mathematics scores on both state and federal standardized assessments. President George W. Bush's landmark school reform effort, NCLB, enacted in January 2002, was acclaimed to be the most comprehensive overhaul of K-12 education in the United States. The legislature was designed to give parents the option of transferring students out of schools that were lacking the success of others while at the same time demanding schools to test and show improvement in all categories of students. NCLB requires Title I schools that fail to meet AYP for 2 consecutive years provide opportunities for students in the school to transfer to another school within the district. The concept of school choice programs is used as a means of assisting in increasing student assessment scores, particularly in mathematics and reading, providing a perspective as to why it is such a significant issue in public education.

At this time, Congress also got involved in the debate surrounding educational innovation and school restructuring. A significant issue of this debate was providing parents with increased options for school choice, but some members of Congress opposed the inclusion of private sectarian schools. A version of the bill, S.2 of President Bush's America 2000, did not make it out of the Senate. The report stated, "Supporters assert that choice empowers parents and involves them more in their children's education. Parents, choosing one school over another, will be wielding a strong accountability weapon against inferior schools" (Congressional Research Service, 1993, p. 81). Those opposing were just as vocal. The report went on to include,

Opponents focus on threats to education equity posed by choice. They argued that greater segregation of pupils by race, ethnicity, and socioeconomic status is likely to arise because choice programs generally do not provide the required attention to, and financing of, information dissemination, transportation, and monitoring of the effects of choice. (Congressional Research Service, 1993, p. 8)

NCLB was an extension and revision of ESEA. ESEA emphasized equal access, high standards, and accountability. Congress's intentions of ESEA were to assure equal access to education and materials for all students in hopes that this access would assist with making a difference in the academic performance of students (U.S. Department of Education, 2004b). ESEA, a design which was part of the Great Society Program, was to be used to make sure a difference in academic performance in reading, writing, and mathematics would not be as noticeable in children attending urban or rural schools due to the low social-economic status of their parents compared to children attending suburban schools whose parents were considered middle class (Farkas & Hall, 2000). An

important section of NCLB requires states to ensure that students in grades 3-8 be tested in reading and mathematics and again once in high school. The testing results had to be reported for the student population and subgroups of students, such as ELs, students in special education, racial minorities, and children from low-income families. Each state was required to bring all students to the “proficient level” on state tests by the 2013-2014 school year, even though each state got to decide, individually, just what “proficiency” should look like and which tests to use (U.S. Department of Education, 2002). NCLB also requires schools to inform parents of the school’s performance as well as provide an explanation of the terms and statistics accompanying the school report card (U.S. Department of Education, 2002). According to ESEA, provisions for Title I schools are provided through funding to assist their high-poverty students in showing improvement by achieving higher scores on the state’s end-of-the-year standardized test. Schools with more than 50% of their enrollment from low-income families may use the funds for school-wide initiatives (U.S. Department of Education, 2008a).

The United States Department of Education commissioned a report on the analysis of the effectiveness of NCLB by examining forced school choice for schools not making AYP. Grady and Biellik (2010) found a shift in student assignment patterns and reported that from 1993 to 2007, the percentage of students enrolled in assigned public schools decreased. With some exceptions, the overall trend away from enrollment in assigned public schools between 1993 and 2007 was evident across student and household characteristics. The trend away from attending assigned public schools was evident for White students, Black students, and non-poor students. There were 10 students whose parents’ highest level of education was a high school diploma; 11

students' parents attended some college, graduate, or professional school; some of the students were from two-parent households, and the students were living in all regions of the country. No measurable difference was found in the percentage enrollment in assigned public schools from 1993 to 2007 for the following students: Hispanic students, near-poor and poor students, students in one-parent households, and students whose parents' highest level of education was less than a high school diploma or GED.

Schmidt (2008) examined whether or not NCLB has lived up to its purpose of ensuring success for all students, particularly those who are economically disadvantaged. He discussed in detail the fundamental reason for what he felt was a significant weakness in the NCLB legislation. Schmidt cited Walter Heller, who was chairman of the Council of Economic Advisors for President Johnson. Heller cited for President Johnson a study that showed a "correlation between low educational attainment and poverty" (Schmidt, 2008, p. 19). Although correlation does not prove causation, Heller's research, coupled with a quantitative decline in SAT scores in addition to student achievement gaps, helped Johnson realize the need for increased academic support for those students who are most commonly poverty stricken—lower class and minority students. With ESEA, federal involvement in public education sought to "provide compensatory educational services for economically disadvantaged school districts" (Schmidt, 2008, p. 19).

Facts have been used from other analyses conducted to determine whether or not NCLB has lived up to its stated purpose of ensuring success for all students, particularly those who are economically disadvantaged. Schmidt (2008) affirmed that NCLB does a disservice to today's underprivileged students. According to the law, for a school or school district to be deemed successful, they must meet AYP. Each state is required to

set proficiency goals in reading and mathematics for students in grades 3-8. All students and students in specific subgroups (i.e., Black, White, and special education) must meet these targets. If one subgroup in the school does not meet the goal, the success of other subgroups is not a factor, and the school is judged to have failed. After just 2 consecutive years of not making AYP, the school begins to fall into federal sanctions according to the law. Schmidt argued this is problematic, because “one size does not fit all and, as such, the status model and subgroup provision have combined to unfairly affect schools with significant proportions of disadvantaged students because they place these schools at the highest risk for federal sanction” (p. 21).

The problem that public education continues to have today is finding a state and national assessment system that can accurately and adequately determine the quality of education at each school. Public education is also seeking meaningful recommended changes that can assist an underperforming school with improvements needed to be classified as an average school. NCLB was in place to mandate a plan to assist underperforming schools, but the accountability system is not providing everything it promised. ESSA, which replaced NCLB, allows the government to retain a role in public education. However, the primary responsibility is on the state when it comes to establishing standards. ESSA proposes equity among students and requires higher standards of learning for all students, which will prepare them for college and careers (Elementary and Secondary Act (2019)).

The magnet school concept was fundamentally designed to attract students from vast racial backgrounds to an alternative educational program that would result in racially balanced school settings (Blank, 1989b). Instead of forced busing of children to a school

in an unfamiliar neighborhood, families could now choose a new program at a specific theme-based magnet school. The effort was to slow the “White flight” of students from outlining suburban school districts to private schools. Barr and Parrett (1977) and Cookson (1994) referred to the “White flight academies” as an alternative for parents who panicked with the forced busing mandate and wanted to avoid sending their child to a school with predominately African-American students. Therefore, they established private, all-White schools. “Despite the Court’s decision, de facto segregation continued, north and south, because America’s neighborhoods are segregated by race and class” (Cookson, 1994, p. 27). The theory, according to a report by the U.S. Department of Education (2004), was to

create a school so distinctive and appealing that it will draw a diverse range of families from throughout the community eager to enroll their children even if it means having them bused to a different and, perhaps, distant neighborhood, but to do so, the school must offer an education option, a specialty that is not available in other area schools. (p. 1)

Klauke (1988) alleged that magnet schools acted in opposition to racial segregation by allowing access to schools outside the established school district boundaries and provided parents an opportunity to enroll their child in a neighboring school without being forced. The options continued to expand; the attraction of magnet schools became the center of a specialized program. Educational leaders and politicians at the local, state, and national levels used the magnet school concept as the answer to urban reorganization, reform, and innovation (Blank & Archbald, 1998; Klauke 1988). Most importantly, leaders and politicians wanted the alternative concepts of magnet

schools to be perceived by their constituents as an established program located in a neighborhood that is almost aligned with regular schools within a system. Klauke vividly described the concept of a magnet school as an innovative approach that parents should recognize as a short-term initiative by parents, community, and staff.

Kafer (2005) reported that by the mid-1970s, the magnet concept enabled magnet schools to continue to grow and appear in most urban cities due to desegregation mandates and the federal funds that motivated schools to create alternative programs that were based on choice and were attractive to parents and students. A decade after the emerging of magnet schools, Steel and Levine (1994) reported there was a shift in the court's decision to provide opportunities for families to voluntarily elect another school based on unique program qualities from an exclusive reliance which was based on required desegregation through mandatory reassignments of students to neighboring schools.

The new federal changes that became law in the legislation recognized parent interests and satisfied their requests for more exceptional options as well as promoted an increase in involuntary transfers. The federal court decision had a significant impact on the expansion of magnet schools when they accepted the concept as a method of desegregation (Smrekar & Goldring, 1999; Steel & Levine, 1994).

Desegregation was no longer the public school priority, and with no interruptions of the magnet school, there was a movement that shifted toward school choice as the basis for the alternative program option (Rossell, 2005). The U.S. Department of Education (2008b), announced that magnet schools were more than a solution to desegregation mandates. Magnet schools' theme-based approach displayed many of the

factors connected to effective schools: innovation in program and practice, staff and a curriculum that was logical and consistent, increased parent and community involvement, and greater student engagement. In the best of magnet school programs, this adds up to higher student achievement (U.S. Department of Education, 2004a).

Steel and Levine's (1994) study reported the history of these magnet programs provided a distinctive methodology or unique content approach that led to the magnet school movement.

As stated by the U.S. Department of Education (2004a), magnet schools were developed first in large urban school districts seeking to reduce racial isolation in their schools, allowing parents the opportunity to volunteer rather than pose a mandatory student assignment. The magnet schools' educational programs were modeled after well-established specialty schools that offered advanced programs to selected students, such as Bronx School of Science, Boston Latin School, and Lane Tech in Chicago. The first magnet school curricular programs were identical to the themes of specialty school curricular programs such as mathematics, science, and the performing arts. The magnet school programs were designed to be different; the school's enrollment was driven by student choice based on interest rather than the selection of students by testing (Innovations in Education: Creating Successful Magnet Schools Programs, 2004).

In the United States, magnet schools make up the largest system of choice (Frankenberg, Siegel-Hawley, & Wang, 2011). The magnet school system has a record of promoting diversity and academic achievement (Bifulco, Cobb, & Bell, 2008; Gamoran, 1996; Siegel-Hawley & Frankenberg, 2012). As a traditional neighborhood public school, magnet school goals were to increase student diversity and achievement.

Rarely has it been evaluated whether the magnet school's unique curriculum and the instructional approach effectively aligned to what research indicates has the components that identify it as an academically successful magnet program and are achieving the goals set by policymakers and educators.

In magnet schools, a more specific and integrated program is offered to attract a diverse group of students for that specific program (Waldrip, 2002). For example, themes are offered, such as problem-based learning, global exploration, technology, arts, and music, writing and publishing, math and science, and academic acceleration. Most magnet schools also have the flexibility to promote an innovative curriculum. Many parents choose a school, such as a magnet school, to give their students a different opportunity based on a specific theme or program to ignite their passion. The National Center for Education Statistics conducted a study that showed that the magnet school is one that is a true magnet, meaning that students attending the school are there by choice, and no one is assigned by default based on the address (Rossell, 2005). Magnet schools that are devoted to students offer a unique atmosphere in which the population is removed from a residential boundary that may bias parent perceptions of the demographics or academic performance of the school (Rossell, 2005). However, magnet schools whose programs are implemented correctly must continue to be monitored by the district leadership to avoid adverse effects on surrounding schools (Poppell & Hague, 2001).

In the continuation of magnet school success, diversity continues to be a significant factor (Ackerman, 2013). After the 2007 Supreme Court decision in *Parents Involved in Community Schools v. Seattle School District No. 1*, "The long history of

their efforts reveals the complexities and difficulties they have faced” (Coffee & Frankenberg, 2009, p. 1). The ruling by the Supreme Court, referred to as the PICS decision, stated that “schools may no longer use an individual student’s race or ethnicity as a sole factor in assigning students to a particular school site” (Coffee & Frankenberg, 2009, p. 1).

Literature overviews about academic impacts and achievement in magnet schools continue to be controversial. Many scholars report that non-magnet students’ academic performance is not as high as students attending a magnet school. Other scholars state that the academic achievement of non-magnet students and magnet students reveal in some cases that the non-magnet students’ academic success is higher than magnet school students. Research has not published a study of the academic achievement of students in magnet schools compared to other magnet school students. “The achievement gap is one of the most talked-about issues in U.S. Education” (Ladson-Billings, 2006, p. 3). In this context, achievement gap refers to the vast differences in academic performance between groups of students that can be seen in grades, standardized test scores, advanced placement, enrollment in honors courses, dropout rates, and college completion rates, among other measures of success (Ladson-Billings, 2006). As reported by the National Governors’ Association (2005), the achievement gap is a matter of race and class, as across the U.S., “a gap in academic achievement persists between minority and disadvantaged students and their white counterparts” (p. 5). The achievement gap is most often used to describe the troubling performance gaps between African American and Hispanic students and their White peers and the similar discrepancies found between students from low socioeconomic families and those who are not. Federal education

accountability measures have also increased awareness of gaps in performance based on sex and English-language proficiency (Gardner, 2017).

The assumption is that magnet school students are high achievers who possess the intellectual potential, aptitude, and functional ability to achieve in a rigorous academic environment. An early study conducted by Gamoran (1996) utilized national survey data compiled by the National Educational Longitudinal Study. Gamoran found that during the late 1980s through the mid-1990s, the achievement was higher in math, science, reading, and social studies in public magnet schools that increased rapidly in urban areas than comprehensive public schools. He concluded that in science, reading, and social studies, achievement gaps were statistically significant, and the achievement benefits of magnet schools were substantial. Gamoran's results were included in a review of the empirical literature on student achievement in magnet schools published by the Institute on Metropolitan Opportunity (2013).

Other researchers received similar results as Gamoran's (1996) as it relates to the higher academic performance of magnet school students compared to non-magnet school students' academic performance. However, some studies' results revealed equally higher academic achievement results in non-magnet school students to those of magnet school students.

A few studies have concluded that magnet schools and their programs have shown a positive impact on student achievement. Researchers have indicated several reasons for higher levels of student achievement at magnet schools: for example, including higher per-pupil spending; the provision of more resources; the creation of a safe, orderly learning environment; more excellent selectivity in student admissions; and the ability to

attract more highly qualified teachers (Hadderman & Smith, 2002).

Several studies conducted by researchers only report a comparable performance between magnet and non-magnet schools/traditional public schools. For example, Blazer (2012) revealed mixed results with some studies findings that magnet school students had higher level of achievement and other studies finding comparable performance between magnet and non-magnet students. However, these studies indicated that students enrolled in magnet schools can benefit from their unique course offerings and innovative instructional practices while maintaining or increasing their achievement levels in core areas (Blazer, 2012).

The following researchers' studies in Blazer's (2012) article concluded that students attending traditional public schools and magnet schools had comparable levels of achievement.

Archbald and Kaplan (2004) conducted a study to determine if school districts with magnet schools had higher National Assessment of Educational Progress (NAEP) scores than those without magnet schools. They also compared districts with a large percentage of magnet schools (more than 20%) to districts with a low percentage of magnet schools (less than 20%) and districts with no magnet schools. Their nationwide sample included over 30,000 students from 1,000 schools and 300 school districts. The researchers found that school demographic variables, including parental education level, school median income, and the number of children living below poverty, had a substantial effect on student achievement.

Poppell and Hague (2001) compared the academic achievement of magnet and non-magnet school students in Duval County (Florida) Public Schools. As part of Duval

County's desegregation plan, magnet schools were established at approximately half of the district's 150 schools. The researchers found that magnet school students' Stanford Achievement Test scores exceeded those of non-magnet school students at the elementary, middle, and high school levels. Also, the test scores received by low-income magnet students exceeded those of the district's low-income, non-magnet students (Blazer, 2012).

Yu, Li, and Tompkins (2005) studied seven elementary magnet programs in Prince George's County Public Schools in Maryland. The researchers compared the grade 5 reading and mathematics performance of students who had been enrolled in magnet and non-magnet programs when they were in grade 4. Students were matched on gender, ethnicity, poverty status, and prior reading and mathematics achievement test scores. Results indicated that the French Immersion magnet program had a positive impact on students' Maryland School Assessment (MSA) reading and mathematics scores. The other six magnet programs (which focused on areas such as music and technology; creative and performing arts; and science, math, and technology) had minimal, if any, effect on students' MSA reading or mathematics scores (Blazer, 2012).

Esposito's (2010) study on student- and school-level data from the Educational Longitudinal Study of 2002 represented a national sample of students attending 920 schools. The study analyzed mathematics achievement data from almost 12,000 students in traditional public schools and themed and unthemed magnet schools. The results indicated that traditional public school students scored slightly higher in mathematics, although not significantly so, in both the 10th and 12th grades. Esposito estimated that the type of school students attended accounted for only 3-6% of the individual test score

variance and concluded that changing school practices instead of school types might lead to more successful school improvement efforts (Blazer, 2012).

Compared to charters and private schools, very few achievement studies have focused explicitly on magnet schools. Over time, magnet schools have taken on an achievement orientation in addition to their original desegregation role (Rossell, 2005). Current research does not exist that compares student achievement in different rural and urban magnet schools through data collection that will show if there is a compelling academic achievement in magnet schools.

Evaluation of student achievement in magnet schools presents mixed results (Institute on Metropolitan Opportunity, 2013). Poppell and Hague (2001) concluded that “studies often compare the achievement of a magnet and non-magnet students without controls for initial differences in achievement” (p. 17) and “comparisons fail to inform about differences in educational value-added between the types of schools” (Ballou, Goldring, & Liu, 2006, p. 3).

If the students who seek admission to magnet schools have parents with above-average education and commitment to their children’s education, it is unclear how much of these students’ subsequent academic success should be attributed to the quality of the magnet schools or parental influences regardless of the school attended (Ballou et al., 2006). Such an example can be biased upward, while in theory, it could go either direction. “If parents seek magnet schools for children whose performance in regular public schools is slipping, the magnet school may appear to be ineffective if judged against regular schools serving students whose performance is exhibiting no decline” (Ballou et al. 2006, p. 3).

Ballou et al. (2006) studied magnet schools and student achievement to determine if the magnet program affects a child's performance. Over 6,000 test score samples on nearly 2,700 students were collected between 1999 and 2003. Concerning math scores for fourth and fifth graders over time, it appeared that the magnet schools had a positive effect on student performance on standardized tests. The test scores did not necessarily increase with the number of years spent at the magnet school (Ballou et al., 2006). Contrarily, reading scores did not appear affected by the presence of the magnet program. Similar to math, reading scores did not seem to be affected by the number of years the student attended a magnet program. After applying controls for student demographics, however, the results were not significant, suggesting that even though the students were randomly assigned to these schools, it is not accurate to say that the magnet program had an impact on student performance (Ballou et al., 2006).

Adcock and Phillips (2000) used a valued-added model and hierarchical linear model in Prince George's County, Maryland and found that magnet students performed worse after taking student characteristics into account. A study in Wake County, North Carolina (Penta, 2001) found no difference in program magnets or year-round magnets from non-magnets after controlling for race and socioeconomic status. Lopata, Wallace, and Finn (2005) did not find higher student achievement looking at fourth and eighth graders in New York in a Montessori school, a standard magnet format (Blazer, 2012).

The primary issue that exists is whether the curriculum in magnet schools improves the academic achievement of students and the results are higher on a standardized test in reading and math for students attending a rural magnet school when compared to students in another rural and an urban magnet school. Poppell and Hague

(2001) stated that a problem exists because the research available indicates test results that magnet and non-magnet student achievement are compared without controls for initial differences in achievement. Evaluations of magnet schools have suffered from limitations on methods used in studies on magnet schools. They even conducted comparison research on 75 magnet and non-magnet schools in Duval County Public Schools in Florida. They found that the magnet school students' end-of-the-year state test scores exceeded those of non-magnet school students at the elementary, middle, and high school levels. The results also revealed that low-income magnet students exceeded those of the district's low-income, non-magnet students. The responsibility is for each family to determine whether the level of academic growth makes a school more appropriate for their child. When a lack of choice by parents to achieve racial balance occurs or leaves schools under capacity, districts often resort to creating a magnet school in the hope of creating a more diverse population (Rossell, 2002).

A significant number of actual studies have concluded that test scores indicate that students in magnet schools outperform their peers in traditional public schools. Studies have shown magnet schools have increased student achievement, student motivation, and satisfaction with school, teacher motivations, and morale as well as parent satisfaction with the school.

Schwalbach (2019) stated that school choice is a growing movement that is lifting thousands of kids across America. The results are tangible, and some states are leading the way by giving parents more options in their children's education than ever before. He listed the 10 most promising benefits of school choice:

1. School choice is good for student safety.

2. School choice increases parental satisfaction and involvement.
3. Education choice can give students an education tailored to their needs.
4. School choice provides options for low-income families.
5. School choice leads to higher graduation rates.
6. School choice saves taxpayer dollars.
7. School choice puts competitive pressure on schools.
8. School choice makes schools more accountable.
9. School choice makes education dollars go further.
10. School choice helps cultivate citizens.

In a research study conducted by Hausman and Goldring (1997), they found that magnet school parents indicated that they based their choice of school on academics, values, and discipline/safety. Also, parents who choose magnet schools are highly satisfied and tend to be involved in their children's education (Bauch & Goldring, 1996; Goldring & Shapira, 1993).

Magnet schools remain the most widespread form of school choice. Blank (1989a) noted that the first magnet schools were designed in the early 1970s; in 1982-1983, one third of the largest urban districts had magnet schools; and today, it would be difficult to find an urban school system without a magnet program.

According to the Parent and Family Involvement in Education Survey, parents in households with children enrolled in K-12 schools in 2012 were asked questions that included information about their satisfaction of the school overall, the teachers their child had that year, academic standards, order and discipline, and the way staff interacted with parents. All schools reported a high level of satisfaction with their child's school, but

parents of students in charter and district schools of choice reported similar rates of satisfaction (McQuiggan, Megra, & Grady, 2017; U.S. Department of Education, 2017).

Testimonials of parents who have students attending a choice magnet school add insight to the academic achievement of students attending a magnet school as well as parent justification for selecting a magnet school as the school of choice for their students. Mr. James Houston, whose daughter attends Anna Grace Academy of the Arts Elementary Magnet School (2019) in Avon, Connecticut, stated,

Mya has been with Ana Grace since its opening. Academically she is thriving. I cannot believe how amazingly well she is reading and how driven she is to work on her mathematics skills. We also love how the arts are being integrated into the curriculum and look forward to the intermezzos so we can see their progression in the arts. (p. 3)

Monalisa Geda, a parent of a student attending Global Experience Magnet School (2019), stated,

My daughter's love of learning is supported and nurtured at Global Experience Magnet School (GEMS). She has developed good relationships with her teachers. I am grateful to have found a place where she can still go to school and learn because it is what she really loves to do. The programming is excellent, and the school seems to be continually improving. (p. 1)

An Eliot Arts Magnet Academy (2019) parent stated,

I am a proud parent of Eliot, and my daughter chose to move from a private school to Eliot in 6th grade, and she is thriving! They bring enriching experiences to the students at Eliot. My family is thrilled with the school. My daughter

recently shared that she cannot wait for college and feels prepared for high school. I feel that Eliot has not only provided my daughter with many ways to express herself artistically. It also is preparing her academically for higher education. (p. 1)

History of the Problem

The concept of a magnet school came at a time of racial unrest across the United States in the late 1600s. The racial segregation of students in public schools over the years eventually led to peaceful solutions to desegregate schools and the establishment of magnet schools in some school districts. Districts are establishing competitive-admission magnet schools to provide a rigorous curriculum for the highest achieving students (Finn & Hockett, 2012; Steel & Levine, 1994). The main purpose of the creation of magnet schools was to offer parents and students an alternative education focused on an area of interest that will draw students from a variety of school districts. Students were to come together by their shared educational goals, resulting in voluntarily desegregation. Some reports today state that magnet schools have been said to be racially and economically diverse to promote academic excellence and instructional innovation. The diversity is created to lure in students based on their interest in studies while exposing them to more diversity will improve academic performance. Since the late 1960s, magnet schools have played an important role in the reform process in American education because of the prospect of decreasing segregation processes and increasing the opportunities and choices for all students and, more specifically, minority students. With this reform effort, magnet schools now hold a prominent place in the history of education reform in the United States.

The problem that exists for this study is after conducting thorough research; there

has not been a research study conducted on comparing the effectiveness of academic performance in reading and math on a state assessment of students attending a magnet school in a rural school district to students attending a magnet school in another rural and urban districts. Poppell and Hague (2001) claimed that while magnet programs may be achieving their goal of diversifying the population, researchers often fail to fully assess the fidelity of a magnet school because they do not identify whether magnet schools are showing that they produce a higher level of academic achievement than schools without such programs. Poppell and Hague's study of magnet schools described and evaluated only the implementation of the program itself and not the actual results associated with student achievement.

Gamoran (1996), when he began the study, speculated that student achievement would be higher in magnet schools than in comprehensive public schools. He reasoned that students would form social relationships around the magnet schools' specific aims and that this would lead to better academic experiences. He was right about the achievement differences; he found that students in magnet schools did score higher on science, reading, and social studies tests than students in comprehensive public schools. He was wrong, however, about the reasons for these higher scores (Gamoran, 1996).

A research paper revealed that three studies to date evaluated the achievement effects of the Milwaukee Parental Choice Program. The first study, conducted by Witte et al. (1995), concluded that there were no relative achievement gains among the choice students. The second study, by Greene et al. (1997), found that the choice students made statistically significant test score gains in both reading and math by their third and fourth years in the program. The third study, by Rouse (1998), reported that the students

selected to attend a choice school experienced significantly faster gains in math scores but showed no differential gains in reading. To understand the reason these three studies generated conflicting results, two aspects of the evaluations must be taken into consideration: the selection of the control, or comparison group, and the method of controlling for family background and student ability.

The evaluation of magnet schools in rural and urban school districts in South Carolina uses the same measurement assessed by the South Carolina Department of Education. The comparison has always been of magnet and non-magnet schools with similar students, which could be determined by the economic status of the students attending the school reported by the school district. For example, end-of-the-year state assessment scores of students attending Title I schools are compared to the scores of Title I students in another district with regard to the number of students tested in that school. There has never been a study conducted on comparing the academic achievement of students in a rural magnet school to another group of students in magnet schools in a different rural and urban district.

Summary

This review of literature is important information regarding the history of the problem and the research related to the problem. The research indicates that very few achievement studies have focused explicitly on magnet schools, and any comparison to achievement have been of non-magnet schools. The literature did not suggest a definitive answer to the question of whether students attending rural elementary magnet schools achieve higher academic results on the SCReady test in math and reading compared to students in another rural and an urban magnet school. However, research does indicate

that the evaluation of magnet schools in rural and urban school districts in the south uses the same measurement assessed on the annual school report card by the state department of education. The comparisons have always been of magnet and non-magnet schools with similar students, which could be determined by the economic status of the students attending the school reported by the school district. For example, end-of-the-year state assessment scores of students attending Title I schools are compared to the scores of Title I students in other districts with regard to the number of students tested in that school. There has never been a study conducted on comparing the academic achievement of students in a rural magnet school to other students in a magnet school in another rural and an urban school district.

Chapter 3: Methodology

Introduction

The focus of this quantitative research study was to determine if the academic performance on the state assessment of students in grades 3-5 attending a magnet school in a small southern rural district differ than students in grades 3-5 attending a magnet school in another small rural and an urban southern school district. This study determined how stakeholder survey results on their satisfaction with the learning environment in a rural magnet school differ from the survey results in another rural and an urban magnet school. The research study revealed the results of comparing the academic performance of magnet school students to other magnet school students on the same end-of-the-year test. Consequently, there are research and data that would be the foundation for such a study.

Research Design and Rationale

The study analyzed and compared the academic performance of students in three elementary magnet schools. The choice schools in this study were in districts located across South Carolina in the upstate, midlands, and the low country. Quantitative data analyzed for this study are from SCReady assessment data that reflect the scores of students in grades 3-5 for multiple years of the SCReady standardized test administered in reading and math. The grade levels were selected based on the appropriateness of the study, and the data collected assisted in obtaining information that answered the following research questions:

1. How does reading achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?

2. How does math achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?
3. How does stakeholder satisfaction differ in rural magnet schools compared to urban magnet schools?

After conducting the study, comparing, and analyzing the cut scores, which were scale scores from the end-of-the-year standardized test for targeted third- through eighth-grade students between the school years 2016-2017, 2017-2018, and 2018-2019, this research study attempted to determine if the academic performance of students on the statement assessment in grades 3-5 attending a magnet school in a small rural southern district is higher, equal to, or lower than students in grades 3-5 attending a magnet school in another small rural and an urban school district (South Carolina Department of Education, 2017, 2018b, 2019).

Overview of Methodology

This study examined the effectiveness of academic achievement of a magnet school program in a rural school district on the SCReady annual assessment in reading and math for students in grades 3-5 compared to the academic achievement of another rural and an urban magnet school district's program in South Carolina on SCReady. The study also determined if the survey results on stakeholder satisfaction with the learning environment in an elementary magnet school in the rural and urban school district had an impact on student achievement. The data collection consisted of state testing results for students included in this study in grades 3-5. The testing results were retrieved from each

school's report card on the South Carolina Department of Education website. Three research questions were composed for this study. Two of the questions were related to the comparison results of the academic achievement of students attending a school in a rural or urban school district. The third question was related to the survey results of stakeholder satisfaction with the learning environment in elementary magnet schools. The researcher examined if the academic achievement results of students in the rural magnet school in a southern school district were higher, the same, or lower than students in another rural and urban school in South Carolina. The study determined the survey results of stakeholder satisfaction with the learning environment in an elementary magnet school in a rural or urban school district have an impact on student achievement. The findings and conclusion provided the knowledge for understanding the effectiveness of academic success for students who attended a magnet school in a rural and urban school district. While researching other studies on the academic performance of magnet school students compared to other magnet school students, the researcher found the need for this study because other researchers indicated that studies have only evaluated and compared magnet and non-magnet schools' student academic achievement. The evaluations have suffered from "methodological limitations because some evaluations merely compare the achievement of the magnet and non-magnet students" (Poppell & Hague, 2001, p. 17).

Data Collection

This study used existing statistical data using computational techniques. The researcher collected the scale scores for reading and math from the yearly report card for each school in the study. The information on the scale scores for reading and math for students in grades 3-5 in each school for the years 2016-2017, 2017-2018, and 2018-2019 were analyzed and compared to answer the research questions. Did students in grades 3-

5 who attended an elementary magnet school in a southern rural school district achieve higher academic results on the SCReady test in reading and math compared to students in grades 3-5 in another southern rural and an urban magnet school? The survey results on stakeholders associated with magnet schools in a rural southern school district were analyzed and compared to stakeholders in another rural and urban school district to determine their satisfaction with the learning environment as it relates to student achievement.

In South Carolina, the score range for the students to meet standards for their grade level changed at the end of the year on the state standardized tests in reading and math. Therefore, the researcher displayed only the actual score obtained by students in that grade for reading and math end-of-the-year tests for the school years 2016-2017, 2017-2018, and 2018-2019 for third through fifth graders who attended a magnet or choice school. The South Carolina performance level scale score for reading and mathematical vertical scale score range are displayed in Tables 1 and 2.

Table 1

Reading Vertical Scale Score Ranges

	Does Not Meet	Approaches	Meets	Exceeds
Grade 3	100-358	359-451	452-539	540-825
Grade 4	100-418	419-508	509-592	593-850
Grade 5	100-449	450-557	558-652	653-875

Table 2

Mathematics Vertical Scale Score Ranges

	Does Not Meet	Approaches	Meets	Exceeds
Grade 3	100-359	360-437	438-543	544-825
Grade 4	100-401	402-481	482-562	562-850
Grade 5	100-447	448-535	536-621	622-875

(South Carolina Department of Education, 2018c)

The impact stakeholder involvement had on the academic achievement of the students was not a significant part of this study. The parent's decision for their students to attend a magnet or choice school can have an impact on student achievement. The purpose of this study was to determine if students in grades 3-5 who attended a magnet school in a small rural southern school district achieved higher academic results on the SCReady test in reading compared to students in another rural and an urban magnet school or if students in grades 3-5 who attended a magnet school in a small rural southern school district achieved higher academic results on the SCReady test in math compared to students in another rural and urban magnet school in South Carolina.

Target Population

The participants in this study were students who attended a magnet or choice school for grades 3-5 and stakeholders of each school during the school years 2016-2017, 2017-2018, and 2018-2019. The third- through fifth-grade standardized testing results in reading and math from three school districts in different regions in South Carolina were

included in this study. The school district in the upstate of South Carolina had 72,000 students, with 15% enrolled in a school of choice. The second school district in the midlands of South Carolina had 2,900 students, with 2.4% enrolled in a school of choice; and the third school district located in the low country had 19,786 students, with 15% enrolled in a school of choice (Great Schools in South Carolina, 2019). For the academic school years in this study, the enrollment and demographics of students in the magnet or choice school vary. The school in the upstate of South Carolina, Magnet School 1 (MS1), had an enrollment of 927 students in grades K4-5; and the demographics were 36% White, 40% Black or African American, 18% Hispanic, 1% Asian, 1% Hawaiian/Island Pacific, and 4% two or more races. Fifty-six percent of students from this school were from low-income families. The school in the midlands of South Carolina, Magnet School 2 (MS2), had an enrollment of 240 students in grades K4-6; and the demographics were 17% White, 80% Black, 2% Asian, and 1% Hispanic. One hundred percent of the students in this school were from low-income families. The school in the low country of South Carolina, Magnet School 3 (MS3), had an enrollment of 740 students in grades K-5-5; and the demographics are 42% White, 15% Black, 38% Hispanic, 1% Asian, and 4% two or more races. Fifty-six percent of the students in this school were from low-income families (Great Schools in South Carolina, 2019). Figures 1-3 show the demographics of the three schools used in this research study.

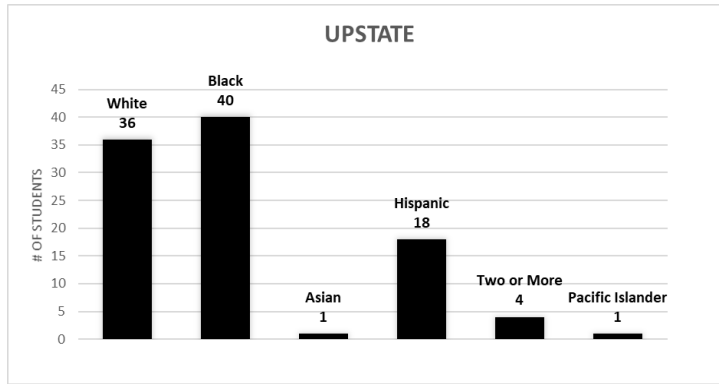


Figure 1. Demographics of MS1 in the Upstate.

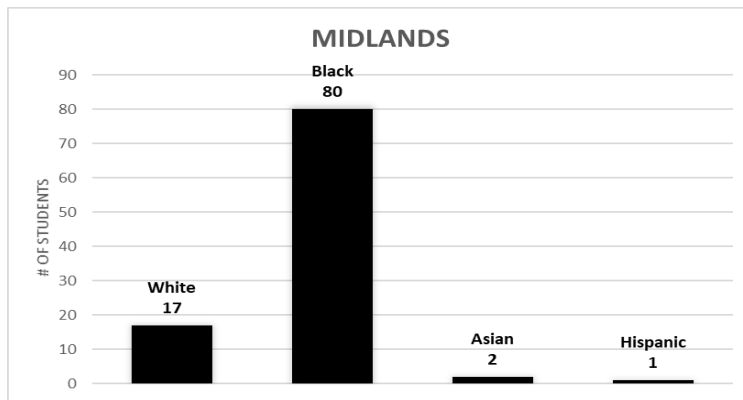


Figure 2. Demographics of MS2 in the Midlands.

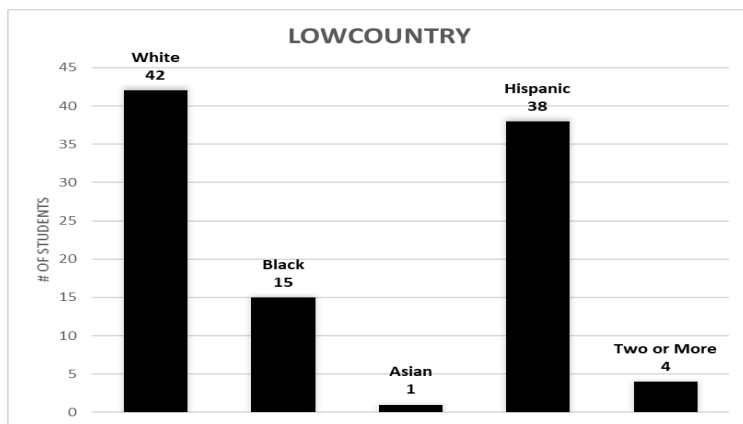


Figure 3. Demographics of MS3 in the Low Country.

Instrument

South Carolina's end-of-the-year standardized tests for the years 2016-2017, 2017-2018, and 2018-2019 for students in grades 3-5 scale scores taken from the schools' report card were the instrument used in this study. All students in grades 3-5 except for students with severe cognitive disabilities were required to take the SCReady for English language arts and mathematics. The exams were often used to evaluate student progress. The SCReady tests were given near the end of the school year in a secure testing environment in the school. The assessments were administered in a computer-based format to students who do not have an individual education plan (IEP) or 504 plan that prohibits them from taking the test on the computer. The scale score differences in the academic achievement of students in rural southern magnet schools and students in an urban magnet school were used in determining if the exposure to a magnet program in different areas of South Carolina affected student achievement.

In South Carolina, elementary and middle schools were rated using a 100-point scale. The point totals were based on a school that had 20 or more ELs. The number in parentheses applied to schools that had fewer than 20 ELs and should have received a rating for EL proficiency. For example:

- Academic achievement: 35 points (40 points without ELs)
- Student progress: 35 points (40 points without ELs) The points in this category were split evenly, rating the progress of all students and the progress of the lowest performing 20% of students.
- Preparing for success: 10 points (10 points without ELs)
- EL proficiency: 10 points (0 points without ELs)

- School quality: 10 points (10 points without ELs; South Carolina Department of Education, 2018d).

South Carolina Report Card Ratings Scale

<i>SC Elem School Ratings</i>	<i>School Quality</i>	<i>English Learners Proficiency</i>	<i>Preparing For Success</i>	<i>Student Progress</i>	<i>Academic Achievement</i>
All Schools	10	10	10	35	35

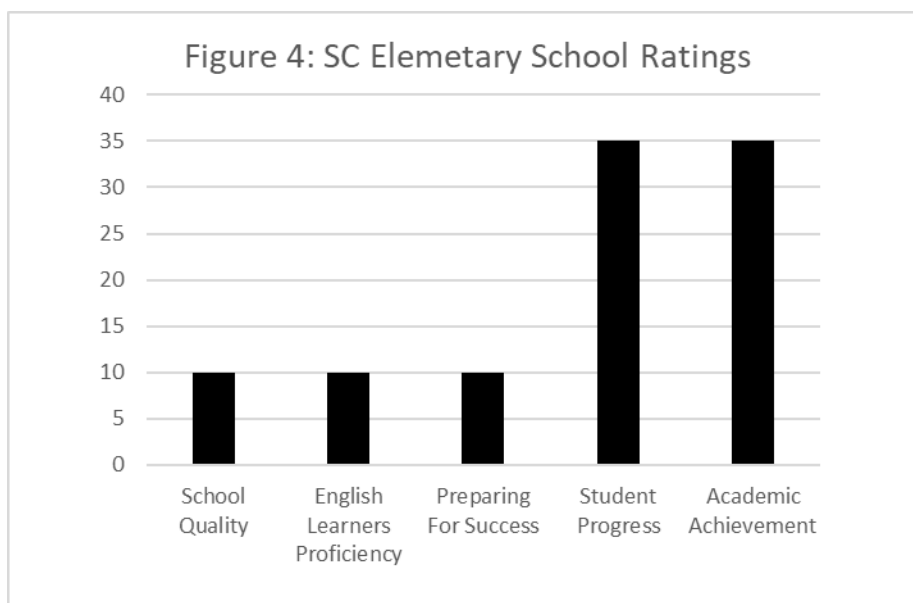


Figure 4. Breakdown of Points on the SC Report Card Ratings.

Data Collection

The researcher collected the scale score data from existing statistical data from the South Carolina state report card for reading and math from the end-of-the-year state assessment for 3 consecutive years on students in grades 3-5. The computational techniques were used to compare the results of each magnet school in this study.

Data Analysis

The researcher analyzed the overall data results for students in grades 3-5 on

reading and mathematics for the 3 consecutive years in this study and reflected on what the findings revealed from the data. The data revealed the answer the researcher was seeking for the research questions: Did students in grades 3-5 who attended an elementary magnet school in a rural school district achieved higher academic results on the SCReady test in reading compared to students in grades 3-5 in another rural and an urban magnet school? Did students in grades 3-5 who attended an elementary magnet school in a rural school district achieve higher academic results on the SCReady test in math compared to grades 3-5 students in another rural and an urban magnet school? Did stakeholders associated with an elementary magnet school in a rural school district survey results indicate they were more or less satisfied than stakeholders in an urban school district with the learning? There has never been a study conducted on comparing the academic achievement of students in magnet schools, so the information gathered from this research study benefited principals, stakeholders, superintendents, and educators in the state department in South Carolina and other states.

Analyzing data is essential to effective school planning. The process of this research study of analyzing data for 3 consecutive years would allow others to view the results to reflect on trends or patterns seen in a grade level as well as identify areas of improvement. The findings could assist with collaboration among schools and districts to learn effective strategies and techniques that would be beneficial to the students attending magnet schools.

Threats to Validity

The SCReady assessment has been reliable among all races and gender groups. The South Carolina Assessment Evaluation Report results indicated that the evaluation

conducted by the South Carolina Oversight Committee and Human Resources Research Organization of Alexandria, Virginia found that SCReady reading and mathematics state assessments evaluated the extent to which the evidence on item development processes complied with the test standard. The report evaluated the strength of evidence for four test standards about item development and showed that the methods used to develop items for the SCReady assessments adhered to industry best practices. The strengths of this evaluation were how the test developers clearly described the purposes and uses of the tests. The item writers were carefully selected and trained; item development processes follow well-established industry procedures; and items undergo multiple rounds of reviews from various perspectives such as content, bias, fairness and sensitivity, and accommodations. Readability and grade-level appropriateness were considered during the item development processes. Quality assurance procedures are in place to oversee the entire process and identify potential issues and a comprehensive review of item development from start to finish. A sample of items revealed that the items adhered to item quality guidelines and that feedback from each round of review was incorporated to improve item quality. The documentation for scaling, equating, and scoring processes for the SCReady assessments for reading and mathematics mostly adhered to industry best practices (South Carolina Department of Education, 2018e).

Another method used to verify the validity of the testing is that each staff member who administered the test was trained appropriately every year before testing began and signed a test security agreement form that stated they adhered to mandated regulations outlined in the South Carolina Department of Education policies. The regulations consist of the setup of the test environment in each school and classroom and the coding of each

student based on information provided in PowerSchool; tests were always stored in a secured locked place. Only teachers who had been trained to administer the test signed out the test each day it was given. Also, the guidelines in the state test administrator's manual required a monitor to be in each classroom or area in which students were tested. Any violations of the code of ethics and test security by a staff member were reported and resulted in the test administrator being put on administrative leave, students testing deemed not useful, and the students retested or even a teacher losing their teaching certificate for failure to abide by testing regulations outlined in the test administrator's manual.

Ethics

The researcher ensured a high level of quality and integrity during this research. Since there were no human subjects involved in this research, there was no need for informed consent or potential harm to participants. The researcher ensured that the study was independent and impartial and respected confidentiality as needed.

Summary

The purpose of this study was to determine if academic achievement scores on the state's SCReady assessment in reading and mathematics of students who attend a magnet school in a rural school district was different than students in another rural and urban magnet school. Grade level scale scores used in this study were taken from 2016-2017, 2017-2018, and 2018-2019 end-of-the-year standardized tests for students in grades 3-5. The SCReady reading and mathematics assessments were given statewide. The research study showed that the demographics and enrollment of students attending each of the schools were different. The selection of schools was based on the school's location in the

south and whether the school was an elementary magnet or school of choice in that district. Determining whether the enrollment or demographics of a school affected the findings was not a factor in this study. This study also examined stakeholder survey responses to determine if stakeholders' satisfaction with the learning environment was different in rural school districts than the urban school district. The process used in this research study analyzed data for 3 years and provided others with results to reflect on trends or patterns seen in a grade level as well as identified areas of improvement. The findings from this research study would be beneficial to other districts that have magnet schools and are interested in the state testing result comparison of magnet schools to magnet schools since there are no other research studies available.

Chapter 4: Results

Introduction

Few achievement studies have focused explicitly on magnet school locales as related to student achievement and stakeholder satisfaction. Over time, magnet schools have taken on an academic achievement role in addition to their original desegregation role (Rossell, 2005). According to Poppell and Hague (2001), research available only indicates that magnet and non-magnet student achievement are compared without controls for initial differences in achievement, and evaluations of magnet schools have suffered from limitations on methods used in studies on magnet schools. Limited research exists that compares student achievement in one magnet school to another magnet school. The data collected in this research study showed there was no compelling difference in the academic achievement between a rural and an urban magnet school. The ultimate goal of this quantitative study was to determine if student academic achievement in reading and math in rural magnet schools shows significant differences than students attending an urban magnet school as well as if there are significant differences in stakeholder satisfaction with the performance of their students who attend a magnet school.

The purpose of this study was to determine if the academic performance on the state assessment in reading and math of students in grades 3-5 attending a magnet school in a southern rural and a southern urban school indicates a significant difference in academic performance. The researcher analyzed data collected on the results of the administering of the end-of-the-year reading and math state assessments and the survey results of stakeholder groups to determine if the results showed that one group was more

satisfied with the academic achievement.

This quantitative research study was designed to evaluate the effectiveness of academic achievement in reading and math in a rural magnet school versus an urban magnet school program and stakeholder satisfaction with academic achievement to determine if there was a difference in the rural and urban students and stakeholders results. The research tool used to conduct a comparative analysis of reading and math achievement was the measured cut scores, which are scale scores from South Carolina's end-of-the-year standardized test for third- through eighth-grade students for 3 consecutive years. To determine if the reading and math scores showed significant differences between the means of the two groups over time, the researcher conducted a statistical hypothesis test (t test). The t test evaluated the t statistics, the t distribution values, and the degrees of freedom to determine the probability of difference between the two sets of data.

Findings

This chapter represents an overview of the findings during the data collection process using a quantitative research method. The researcher obtained data from the annual SCReady assessment. The data reflect the scores of students in grades 3-5 who attended one of the three magnet schools in a rural or urban school district included in this study. Assessment data for the 3 consecutive years of 2016-2017, 2017-2018, and 2018-2019 from the SCReady standardized test administered in reading and math were used in this study. This research study determined if the academic performance on the state assessment of students in grades 3-5 attending a magnet school in a small rural southern district is higher, equal to, or lower than students in grades 3-5 attending a

magnet school in an urban school district and compared to determine if stakeholder groups from each school were more satisfied with the academic performance.

The following research questions guided the research study to address the problem of the study, which is the nonexistence of research that compares the academic performance of magnet school students to other magnet school students.

1. How does reading achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?
2. How does math achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?
3. How does stakeholder satisfaction differ in rural magnet schools compared to urban magnet schools?

Description of the Sample

The elementary choice schools in this study are in districts located in South Carolina in the upstate, midlands, and low country. The achievement data for math, reading, and survey data of stakeholder perceptions of the academic performance of the students for 3 academic school years 2016-2017, 2017-2018, and 2018-2019 were retrieved from the SCReady assessment (South Carolina Department of Education, 2018f). The assessment reflects the scores of the participants who were in grades 3-5 and stakeholder survey results for the years used in this study.

Research Question 1: Reading

To address Research Question 1, comparing the academic achievement results on the SCReady reading test of students in grades 3-5 attending a rural magnet school to the achievement results of students in the same grades attending an urban magnet school, an

independent t test using two-sample assuming equal variances was conducted.

Tables 3 shows the scale score data results of the SCReady reading test given for 3 consecutive years for third graders in both rural and urban magnet schools. The data indicate that students attending the urban magnet school scored higher than the students attending the rural magnet school on the standardized reading test.

Table 4 shows the t -test results indicate that if $\alpha=0.05$ and $p=0.02$, the outcome will determine the significant differences and considering $\alpha>p$, there is a significant difference between grade 3 reading scores of rural and urban magnet school students. These results suggest that there is a greater than 95% confidence that the reading scores of grade 3 students attending urban magnet schools will be higher on the standardized reading test.

Table 3

SCReady Grade 3 Reading, Rural Versus Urban 2016-2018

Year	Rural (MS2 & MS3)	Urban (MS1)
2016	38.65	51.7
2017	36.4	50.3
2018	44.5	59.3
Mean	39.85	53.766667
St. Dev	4.181208	4.8428642

Table 4

t Test: SCReady Grade 3 Reading

	Rural (MS2 & MS3)	Urban (MS1)
Mean	39.85	53.76667
Variance	17.4825	23.45333
Observations	3	3
Pooled Variance	20.46792	
Hypothesized Mean Difference	0	
df	4	
t Stat	-3.76742	
P(T<=t) one-tail	0.009824	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.019648	
t Critical two-tail	2.776445	

Table 5 shows the scale score data results of the SCReady reading test given for 3 consecutive years for fourth graders in both rural and urban magnet schools. The data indicate that students attending the urban magnet school scored higher than the students attending rural magnet schools on the standardized reading test.

Table 6 shows the *t*-test results indicate that if $\alpha=0.05$ and $p=0.03$ and considering $\alpha>p$, there is a significant difference between grade 4 reading scores of rural and urban magnet school students. These results suggest that there is a greater than 95% confidence that the reading scores of grade 4 students attending urban magnet schools will be higher.

Table 5

SCReady Grade 4 Reading, Rural Versus Urban 2016-2018

School Year	Rural (MS2 & MS3)	Urban (MS1)
2016-2017	46.75	50.4
2017-2018	34.4	58.9
2018-2019	38.1	52.3
Mean	39.75	53.86667
St. Dev	6.338178	4.461315

Table 6

t Test: SCReady Grade 4 Reading

	Rural (MS2 & MS3)	Urban (MS1)
Mean	39.75	53.86667
Variance	40.1725	19.90333
Observations	3	3
Pooled Variance	30.03792	
Hypothesized Mean Difference	0	
df	4	
t Stat	-3.15459	
P(T<=t) one-tail	0.017181	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.034362	
t Critical two-tail	2.776445	

Table 7 shows the scale score data results of the SCReady reading test given for 3 consecutive years for fifth graders in both rural and urban magnet schools. The data indicate that student scores of those attending the urban magnet school would be the same on the reading standardized reading test in both rural and urban magnet schools.

Table 8 shows the *t*-test results indicate that if $\alpha=0.05$ and $p=0.14$ and considering $\alpha < p$, there is not a significant statistical difference between grade 5 reading scores of rural and urban students. These results suggest that there is a greater than 95% confidence that the reading scores of grade 5 students attending the urban magnet school

will be relatively the same as the rural magnet school.

Table 7

SCReady Grade 5 Reading, Rural Versus Urban 2016-2018

Year	Rural (MS2 & MS3)	Urban (MS1)
2016-2017	38.5	47.5
2017-2018	42.65	40.4
2018-2019	33.75	56.1
Mean	38.3	48
St. Dev	4.45337	7.861934

Table 8

t Test: SCReady Grade 5 Reading

	Rural (MS2 & MS3)	Urban (MS1)
Mean	38.3	48
Variance	19.8325	61.81
Observations	3	3
Pooled Variance	40.82125	
Hypothesized Mean Difference	0	
df	4	
t Stat	-1.85941	
P(T<=t) one-tail	0.068247	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.136494	
t Critical two-tail	2.776445	

Research Question 2: Math

To address Research Question 2, comparing the academic achievement results on the SCReady math test of students in grades 3-5 attending a rural magnet school to the achievement results of students in the same grades attending an urban magnet school, an independent *t* test using two-sample assuming equal variances was conducted.

Tables 9 shows the scale score data results of the SCReady math test given for 3 consecutive years for third graders in both rural and urban magnet schools. The data

indicate that student scores of those attending the urban magnet school would be the same on the standardized math test in both rural and urban magnet schools.

Table 10 shows the *t*-test results indicate that if $\alpha=0.05$ and $p=0.24$, therefore $\alpha < p$ and there is not a significant statistical difference between grade 3 math scores of rural and urban students. These results suggest that there is a greater than 95% confidence that the math scores of grade 3 students attending an urban and rural magnet school will be relatively the same.

Table 9

SCReady Grade 3 Math, Rural Versus Urban 2016-2018

Year	Rural (MS2 & MS3)	Urban (MS1)
2016	45.55	49.7
2017	44.85	52.6
2018	53.55	69.7
Mean	47.98333	57.333333
St. Dev	4.833563	10.807559

Table 10

t Test: SCReady Grade 3 Math

	Rural (MS2 & MS3)	Urban (MS1)
Mean	47.98333	57.33333
Variance	23.36333	116.8033
Observations	3	3
Pooled Variance	70.08333	
Hypothesized Mean Difference	0	
df	4	
t Stat	-1.36789	
P(T<=t) one-tail	0.121579	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.243158	
t Critical two-tail	2.776445	

Table 11 shows the scale score data results of the SCReady math test given for 3 consecutive years for fourth graders in both rural and urban magnet schools. The data indicate that the students attending the urban magnet school scored higher than the students attending the rural magnet schools on the standardized math test.

Table 12 shows the *t*-test results indicate that if $\alpha=0.05$ and $p=0.003$ and considering $\alpha>p$, these results suggest that there is a significant difference between grade 4 math scores of rural and urban students. These results indicate that there is a greater than 95% confidence that the math scores of grade 4 students attending an urban magnet school will be higher.

Table 11

SCReady Grade 4 Math, Rural Versus Urban 2016-2018

Year	Rural (MS2 & MS3)	Urban (MS1)
2016-2017	49.5	57.7
2017-2018	47.2	61.1
2018-2019	51.55	60
Mean	49.41667	59.6
St. Dev	2.176197	1.734935

Table 12

t Test: SCReady Grade 4 Math

	Rural (MS2 & MS3)	Urban (MS1)
Mean	49.41667	59.6
Variance	4.735833	3.01
Observations	3	
Pooled Variance	3.872917	
Hypothesized Mean Difference	0	
df	4	
t Stat	-6.33748	
P(T<=t) one-tail	0.001587	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.003174	
t Critical two-tail	2.776445	

Table 13 shows the scale score data results of the SCReady math test given for 3 consecutive years for fifth graders in both rural and urban magnet schools. The data indicate that student scores of those attending the urban magnet school would be the same on the standardized math test in both rural and urban magnet schools.

Table 14 shows the *t*-test results indicate that if $\alpha=0.05$ and $p=0.48$ and considering $\alpha < p$, there is not a significant statistical difference between grade 5 math scores of rural and urban students. These results suggest that there is a greater than 95% confidence that the math scores of grade 5 students attending an urban and rural magnet school will be relatively the same.

Table 13

SCReady Grade 5 Math, Rural Versus Urban 2016-2018

Year	Rural (MS2 & MS3)	Urban (MS1)
2016-2017	40.95	50.5
2017-2018	43	29.8
2018-2019	37.95	66.7
Mean	40.63333	49
St. Dev	2.539849	18.49568

Table 14

t-Test: SCReady Grade 5 Math

	Rural (MS2 & MS3)	Urban (MS1)
Mean	40.63333	49
Variance	6.450833	342.09
Observations	3	3
Pooled Variance	174.2704	
Hypothesized Mean Difference	0	
df	4	
t Stat	-0.77622	
P(T<=t) one-tail	0.240479	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.480958	
t Critical two-tail	2.776445	

The results of the opinion of stakeholders are an integral part of the school report card ratings. Therefore, including the results of surveys given to stakeholders was included in this study as the third research question. The survey results consist of all certified teachers in the school, students at the highest school grade, and their parents.

Research Question 3: Stakeholder Satisfaction

Research Question 3 compares the survey results for 3 consecutive years on each school's SCReady report card as they relates teacher, student, and parent satisfaction with the learning environment in each elementary magnet school in this research study. Figures 5, 6, and 7 plot the overall satisfaction of the learning environment of urban and rural stakeholders, which is presented in percentages on the line graph to display the information as a series of data points to reveal the trend in data over intervals of time.

Figure 5 data results show that in comparing the 3 consecutive years included in the research study, teacher satisfaction with the learning environment as it relates to the effects it has on student academic achievement increased in the rural magnet schools and decreased in the urban magnet school.

Stakeholder Satisfaction Data

Urban (MS1): Percent Satisfaction					Rural (MS2& MS3): Average Percent			
with Learning Environment				vs	Satisfaction with Learning Environment			
	Teacher	Student	Parents			Teacher	Student	Parents
2016-2017	100	83.2	86.1		2016-2017	91.85	89.95	93.2
2017-2018	85	87.3	93.1		2017-2018	93.95	86.6	97.25
2018-2019	60	81.2	89		2018-2019	94.55	93.6	95.35

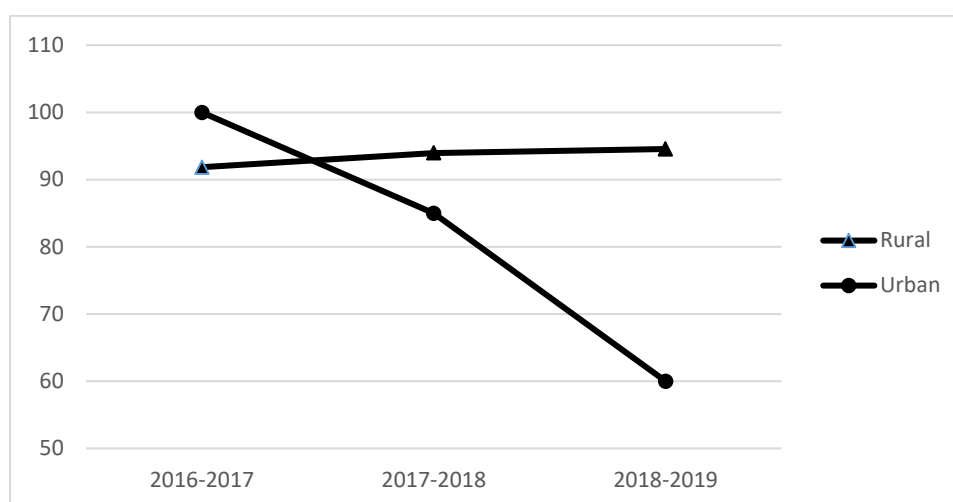


Figure 5. Urban Versus Rural Teacher Percent Satisfaction with Learning Environment.

Figure 6 data results show that in comparison, for 2 consecutive years, students in rural schools were more satisfied with their learning environment except for the year 2017-2018. This year indicates the satisfaction was statistically the same for both students attending a magnet school in a rural school district and students attending a magnet school in an urban school district.

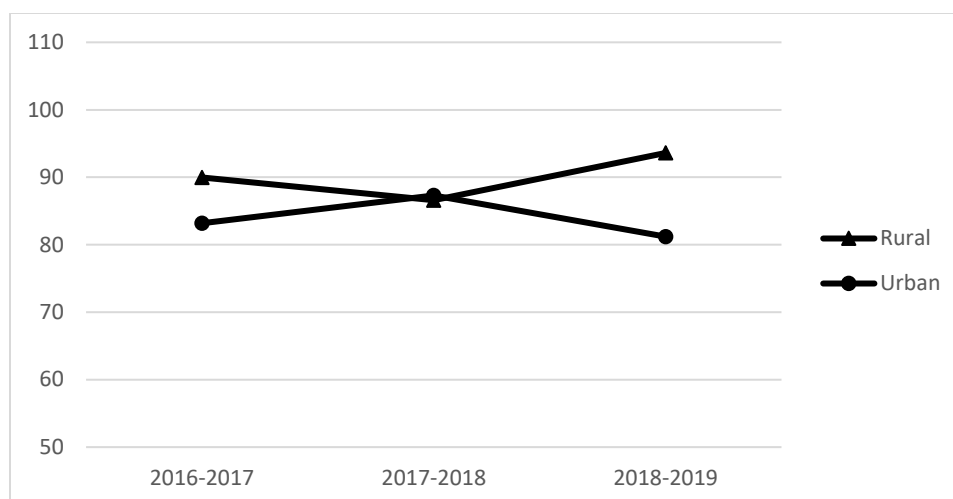


Figure 6. Urban Versus Rural Students Percent Satisfaction with Learning Environment.

Figure 7 data results show that in comparison to both school learning environments, parent satisfaction with the learning environment in rural magnet schools and the urban magnet school showed a satisfactory increase for the 2016-2017 and 2017-2018 school years. Both groups of parent data results showed a decrease in satisfaction for the 2018-2019 school year.

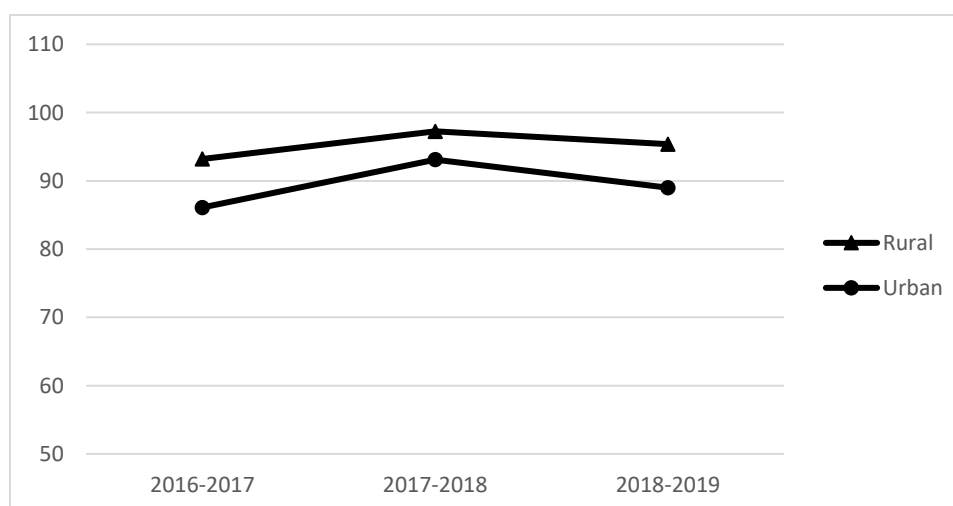


Figure 7. Urban Versus Rural Parents Percent Satisfaction with Learning Environment.

Summary: Reading

When examining reading scores, the researcher performed a t test of all reading scores to determine whether significant differences occurred in each of the third, fourth, and fifth grades between rural and urban magnet school students during the 3 consecutive years in the study. The results of the t tests showed that in third and fourth grade, a significant difference between student reading scores of rural and urban magnet school students was present. The results revealed that urban magnet school students scored higher. However, the results of the t test of the fifth graders attending the rural magnet school indicated that the reading scores would be relatively the same as urban magnet school students.

Summary: Math

T tests were then performed by the researcher to analyze whether significant differences occurred in each of the third, fourth, and fifth grade math scores between rural and urban magnet school students during the 3 consecutive years in the study. T tests showed there were no significant differences in math scores for third-grade and fifth-grade students attending the rural magnet schools and the urban magnet school. The results showed student math scores would be relatively the same. The fourth-grade students' math scores, as indicated by the t test, showed that the fourth graders attending the urban magnet school would score higher than the students attending the rural magnet schools.

Summary: Stakeholder Satisfaction

When examining the survey results of teacher, student, and parent satisfaction with the learning environment over 3 consecutive years, the researcher used the data sets

to create a line graph to display data variables and trends where a change is seen from point to point. The data results showed that teacher satisfaction with the learning environment as it relates to the effects it has on student academic achievement increased in the rural magnet schools and decreased in the urban magnet school. In comparing the student data, 2 consecutive years revealed students in rural schools were more satisfied with their learning environment except. The years 2017-2018 indicate the satisfaction was statistically the same for both students attending a magnet in school in a rural school district and students attending a magnet school in an urban school district. Parent data results when comparing both schools' learning environments indicate parent satisfaction with the learning environment in both rural magnets and urban magnet schools showed a satisfactory increase for the 2016-2017 and 2017-2018 school years. Both groups of parent data results showed a decrease in satisfaction for the 2018-2019 school year.

Overall Summary

The purpose of this research study was to determine how students in grades 3-5 attending a magnet school in a small rural southern school district achieve results differ on the South Carolina Readiness Test (SCReady) in reading compared to students in another rural and an urban magnet school or how students in grades 3-5 attending a magnet school in a rural small southern school district achieve results differ on the SCReady in math compared to students in another southern rural and an urban magnet school. This study will also attempt to determine how does stakeholders results with the satisfaction with the learning environment differ in rural and urban school districts.

This quantitative research study was designed to evaluate the effectiveness of academic achievement in reading and math in a rural magnet school versus an urban

school magnet program and stakeholder satisfaction with academic achievement to determine the differences. The research tool used to conduct a comparative analysis of reading and math achievement was the measured cut scores, which are scale scores from South Carolina's end-of-the-year standardized test for third- through eighth-grade students. To determine if the reading and math scores showed significant differences between the means of the two groups over time, the researcher used the t test to evaluate the t statistics, the t distribution values, and the degrees of freedom to determine the probability of difference between the two sets of data.

The data collected will allow the researcher to share the results of the findings with other educators because a research study does not exist that has examined the academic achievement in reading and math and perceptions of stakeholders on the effects of the learning environment on academic achievement of students attending magnet schools in rural and urban school districts. The student scores in this research study in grades 3 and 4 in urban magnet schools indicated the significance levels were 0.05 higher than rural magnet school student scores on the reading end-of-the-year state assessment. Student scores in grade 5 in urban and rural magnet schools indicated the significance levels were 0.14, which revealed that there was not a significant difference in the reading end-of-the-year state assessment results. Also, math data collected showed that the significance levels of third- and fifth-grade students attending rural and urban magnet schools were 0.24 and 0.48 indicating there was not a significant difference on the math end-of-the-year state assessment results; and fourth-grade student scores in urban magnet schools indicated the significance levels of 0.003 higher than rural magnet school student scores on the math end-of-the-year state assessment. The analysis of the data from

stakeholder satisfaction of the learning environment as it relates to the effects it has on student academic achievement showed that teacher satisfaction increased in the rural magnet schools and decreased in the urban magnet school. The student data revealed students in rural schools were more satisfied with their learning environment for 2 consecutive years. The last year in the study indicates the satisfaction was statistically the same for both students attending a magnet school in a rural school district and students attending a magnet school in an urban school district. The researcher concluded from the data analysis that there were no statistically significant differences in the reading and math academic achievement results of students attending an urban or rural magnet school. However, stakeholder satisfaction with the learning environment data results from the rural magnet schools and the urban magnet school showed a satisfactory increase for the rural stakeholders and a decrease for the urban stakeholders. The data results reveal a significant difference in rural stakeholder satisfaction with the learning environment compared to urban stakeholder satisfaction with the learning environment over time.

The insight gained from this research study will contribute to the lack of quantitative data in existence regarding the comparison of academic achievement in reading and math of students in an elementary rural and urban magnet school as well as the opinions of the stakeholders as it relates to their satisfaction with the academic performance. After a review of the collected data, the researcher noted that reading achievement results were higher in the urban magnet school in grades 3 and 4. The reading achievement results were the same in grade 5 in both rural and urban magnet schools, while the math achievement results were the same for grades 3 and 5 in the rural

and urban magnet schools, and math achievement results were higher in grade 4 for students attending an urban magnet school. Stakeholder survey results indicated that teacher satisfaction with the learning environment effects on student academic achievement increased in the rural magnet schools and decreased in the urban magnet school over the 3 consecutive years. The results revealed that in the rural schools, the students were more satisfied with their learning environment except for the year 2017-2018, which indicates the satisfaction was statistically the same for students attending a magnet school in a rural and urban school district. Parent satisfaction with the learning environment in rural and urban magnet schools showed a satisfactory increase for the 2016-2017 and 2017-2018 school years. Both groups of parent data results showed a decrease in satisfaction for the 2018-2019 school year.

The next chapter discusses the findings which will be presented in a summary that includes the purpose of the research study, procedures, an overview of results, a summary of the statistical test reported in Chapter 4, and the comparison of other research studies to this study. Chapter 5 concludes with extending the knowledge of the topic by emphasizing the quantitative research study's guiding questions, limitations, and delimitations of the study. Also included in this chapter are recommendations based on the researcher's findings for future studies as well as any implications the current study may have for evaluating the effectiveness of academic achievement of students attending a magnet school in a rural or urban school district.

Chapter 5: Analysis and Recommendations

Introduction

The purpose of this study was to determine if the academic performance on the state assessment in reading and math of students in grades 3-5 attending a magnet school in a southern rural school district differ from students attending a magnet school in an urban district. The researcher also analyzed the survey results of stakeholder groups to determine if their results indicated a difference in the satisfaction with the learning environment.

A quantitative research study was used to conduct the study to determine the effectiveness of academic achievement in reading and math in a rural magnet school versus an urban magnet school program and stakeholder satisfaction with academic achievement. The researcher used one method to collect the cut scores data, which are scale scores from South Carolina's end-of-the-year standardized tests.

The interest in conducting this study came from the knowledge that few achievement studies have focused explicitly on magnet schools as it relates to the comparison of the academic achievement of students attending magnet schools. Over time, magnet schools have taken on an achievement orientation in addition to their original desegregation role (Rossell, 2005). According to Poppell and Hague (2001), research available only indicates that magnet and non-magnet student achievement are compared without controls for initial differences in achievement, and evaluations of magnet schools have suffered from limitations on methods used in studies on magnet schools. There has never been a research study comparing the academic achievement of students in rural and urban magnet schools using data that will show if there is a

compelling difference. This study showed the results indicated that indeed there were differences as well as similarities in the reading and math academic achievement of students attending both rural and urban magnet schools. The study also showed that the results of stakeholder group satisfaction with the learning environment increased in the rural school district and decreased in the urban school districts over time.

The study was designed to guide the following research questions:

1. How does reading achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?
2. How does math achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?
3. How does stakeholder satisfaction differ in rural magnet schools compared to urban magnet schools?

To answer the research questions, the researcher used a quantitative methodology to collect the data from the SCReady test from the 2016-2017, 2017-2018, and 2018-2019 school years. The three forms of data collection used were

1. South Carolina College- and Career-Ready Assessment data that reflect the scale scores of students in grades 3-5 for multiple years of the SCReady standardized test administered in reading for the academic school years 2016-2017, 2017-2018, and 2018-2019.
2. South Carolina College- and Career-Ready Assessment data that reflect the scale scores of students in grades 3-5 for multiple years of the SCReady standardized test administered in math for the academic school years 2016-

2017, 2017-2018, and 2018-2019.

3. South Carolina College- and Career-Ready stakeholder data that reflect the results of parent, student, and teacher surveys that indicate their satisfaction with the learning environment as it relates to student achievement in an elementary magnet school for the academic school years 2016-2017, 2017-2018, and 2018-2019.

Restatement of the Problem

Thorough research has revealed the problem that exists for this study is there has never been a research study conducted on comparing the effectiveness of academic performance in reading and math on a state assessment of students attending a magnet school in a rural school district to students attending a magnet school in an urban district. Poppell and Hague (2001) claimed that while magnet programs may be achieving their goal of diversifying the population, researchers often fail to fully assess the fidelity of a magnet school because they do not identify whether magnet schools are showing that they produce a higher level of academic achievement than schools without such programs. Their study of magnet schools described and evaluated only the implementation of the program itself and not the actual results associated with student achievement.

The researcher sought to determine if the location of elementary magnet schools has a significant impact on the academic achievement of students as well as the perception of the stakeholders as it relates to the learning environment in each magnet school. This research study was completed by comparing the academic achievement results of urban magnet school students to rural magnet school students on a standardized

assessment given in the same state. The results on the opinions of the stakeholders on their satisfaction with the learning environment in each magnet school were collected from the school's report card data.

Gamoran (1996), when he began the study, speculated that student achievement would be higher in magnet schools than in comprehensive public schools. He reasoned that students would form social relationships around the magnet schools' specific aims and that this would lead to better academic experiences. He was right about the achievement differences and found that students in magnet schools did score higher on science, reading, and social studies tests than students in comprehensive public schools. He was wrong, however, about the reasons for these higher scores (Gamoran, 1996).

Studies conducted by Witte et al. (1995) concluded that there were no relative achievement gains among the choice students. Greene et al. (1997) stated that the choice students made statistically significant test score gains in both reading and math by their third and fourth years in the program. Then, a third study, by Rouse (1998), reported that the students selected to attend a choice school experienced significantly faster gains in math scores but showed no differential gains in reading. To understand the reason these three studies generated conflicting results, two aspects of the evaluations must be taken into consideration: the selection of the control, or comparison group, and the method of controlling for family background and student ability.

The evaluation of magnet schools in a rural and an urban school district in South Carolina uses the same measurement assessed by the South Carolina Department of Education. The comparison has always been of magnet and non-magnet schools with similar students, which could be determined by the economic status of the students

attending the school reported by the school district. For example, end-of-the-year state assessment scores of students attending Title I schools are compared to the scores of Title I students in another district with regard to the number of students tested in that school. There has never been a study conducted on comparing the academic achievement of students in a rural magnet school to groups of students in magnet schools in an urban district.

How Other Studies Compare to this Study

Magnet schools first emerged as a movement in the early 20th century, and during this time, districts established competitive-admission magnet schools to provide a rigorous curriculum for the highest achieving students (Finn & Hockett, 2012; Steel & Levine, 1994).

While this study is limited to three magnet schools, each located in one of the three regions of South Carolina, there are similarities of the findings in this study that compare to results in other studies as it relates to the academic achievement of magnet school students. There has not been a research study published on the academic achievement of students in magnet schools compared to other magnet school students. According to Gamoran's (1996) research study of public magnet school students, the achievement was higher in math, science, reading, and social studies in public magnet schools that increased rapidly in urban areas than comprehensive public schools. Other researchers received similar results as Gamoran's as it relates to the higher academic performance of magnet school students compared to non-magnet school student academic performance (Blazer, 2012). However, some studies' results revealed equally higher academic achievement results in non-magnet school students to those of magnet school

students. Similar results were shown in this study on rural and urban magnet school student academic achievement in reading and math. Yu et al. (2005) studied seven elementary magnet programs and compared the grade 5 reading and mathematics performance of students who had been enrolled in magnet and non-magnet programs when they were in grade 4. Student results indicated that a foreign language themed based magnet program had a positive impact on student reading and mathematics scores. The other six arts or technology-themed magnet programs had minimal impact, if any, on student reading or mathematics scores. In this research study, the data revealed that students in two grades in urban magnet schools scored higher than rural magnet school students in reading on the state assessment. One grade in both urban and rural magnet schools scored relatively the same on the reading end-of-the-year state assessment. So, even when magnet schools are compared to other magnet schools, there are differences and similarities in the academic achievement results.

Overall, evaluations of magnet schools have suffered due to limited studies of magnet school student academic performance compared to other magnet school student academic performance. “Some merely compare the achievement of magnet and non-magnet students without controls for initial differences in achievement” (Poppell & Hague, 2001, p. 17).

Overview of Results

The test performed to address the first two research questions was an independent *t* test using two-sample assuming equal variances. The third research question is presented as a comparative analysis that is represented in percentages that reveal the trend in data over intervals of time.

To address Research Questions 1 and 2 comparing the academic achievement results on the SCReady reading and math tests of students in grades 3-5 attending a rural magnet school to the achievement results of students in the same grades attending an urban magnet school, an independent t test using two-sample assuming equal variances was conducted. To address Research Question 3, the comparison of survey results of the opinions of stakeholders, who are all certified teachers in the school, students at the highest school grade, and their parents for 3 consecutive years on each school's SCReady report card were studied. A comparative test was conducted to determine the overall satisfaction of the learning environment of urban and rural stakeholders.

Research Question 1: “How does reading achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?”

The SCReady reading test data for 3 consecutive years for third and fourth graders in both rural and urban magnet schools indicate that the urban magnet school students scored higher than the students attending the rural magnet school on the standardized reading test. Fifth grader data in both rural and urban magnet schools indicate that students attending these magnet schools scores would be the same on the standardized reading test in both rural and urban magnet schools.

The researcher concluded that student scores in grades 3 and 4 in urban magnet schools indicated the significant levels were 0.05 higher than rural magnet school students on the reading end-of-the-year state assessment. Student scores in grade 5 in urban and rural magnet schools indicated the significance levels were 0.14. These results showed that there was not a significant difference in the reading end-of-the-year state

assessment results.

Research Question 2, “How does math achievement on the South Carolina Ready Test differ in rural magnet schools compared to urban magnet schools?”

Math test data for 3 consecutive years for third and fifth graders in both rural and urban magnet schools indicated their scores would be the same on the standardized math test in both rural and urban magnet schools. Fourth grader data in both rural and urban magnet schools indicate that the students attending the urban magnet school scored higher than the students attending the rural magnet schools on the standardized math test. These results showed that there was not a significant difference in the math end-of-the-year state assessment results.

The researcher concluded that third- and fifth-grade student significant level scores of rural and urban magnet schools were 0.24 and 0.48 indicating there was not a substantial difference on the math end-of-the-year state assessment results, and fourth-grade student significance level scores in urban magnet schools were 0.003 higher than rural magnet school students on the math end-of-the-year state assessment.

Research Question 3, “How does stakeholder satisfaction differ in rural magnet schools compared to urban magnet schools?”

The results of the opinion of stakeholders are an integral part of the school report card ratings. The survey results consist of all certified teachers in the school, students at the highest school grade, and their parents. The data results show that in comparing the 3 consecutive years included in the research study, teacher satisfaction with the learning environment as it relates to the effects it has on student academic achievement increased

in the rural magnet schools and decreased in the urban magnet school. Data results show that in comparison, for 2 consecutive years, students in rural schools were more satisfied with their learning environment except for the year 2017-2018. This year indicated the satisfaction was statistically the same for both students attending a magnet school in a rural school district and students attending a magnet school in an urban school district. Data results show that in comparison to both school learning environments, parent satisfaction with the learning environment in the rural magnet schools and the urban magnet school showed a satisfactory increase for the 2016-2017 and 2017-2018 school years. Both groups of parent data results showed a decrease in satisfaction for the 2018-2019 school year.

The researcher concluded that the important findings from the data of stakeholder satisfaction with the learning environment in rural and urban school districts revealed that the stakeholders in the same state in a rural magnet school district were more satisfied with the learning environment than the stakeholders in the urban school district.

Summary of Statistical Test

This study was conducted to determine if the academic performance on the state assessment in reading and math of students in grades 3-5 attending a magnet school in a southern rural school district differ from students attending a magnet school in an urban district. The researcher analyzed the survey results of stakeholder groups to determine if their results indicated there was a difference in their satisfaction with the academic performance. The test performed to address the first two research questions was an independent t test using two-sample assuming equal variances. The third research question is presented as a comparative analysis that is represented in percentages on a

line graph to display the information as a series of data points to reveal the trend in data over intervals of time. The t test results indicated that if $\alpha=0.05$ and $p=0.02$, the outcome would determine the significant differences. The t test results showed a p value of 0.02, meaning there was a significant difference between grade 3 reading scores of rural and urban magnet school students. The results suggest that there is a greater than 95% confidence that the reading scores of grade 3 students attending urban magnet schools will be higher on the standardized reading test. The t test results indicated that if $\alpha=0.05$ and $p=0.03$, the outcome would determine the significant differences. The t test also revealed a p value of 0.03 for the results of Grade 4, meaning there was a significant difference between grade 4 reading scores of rural and urban magnet school students. The results suggest that there is a greater than 95% confidence that the reading scores of grade 4 students attending urban magnet schools will be higher. The t test results indicated that if $\alpha=0.05$ and $p=0.14$, the outcome would determine the significant differences. The t test results for grade 5 revealed a p value of 0.14, meaning there is not a significant statistical difference between grade 5 reading scores of rural and urban students. The results suggest that there is a greater than 95% confidence that the reading scores of grade 5 students attending the urban magnet school will be relatively the same as the rural magnet school.

The t test was conducted to determine the difference in math scores of students attending rural and urban magnet schools. The t test results indicate that if $\alpha=0.05$ and $p=0.24$, then $\alpha < p$. The test revealed a p value of 0.24, meaning there is not a significant statistical difference between grade 3 math scores of rural and urban students. The results suggest that there is a greater than 95% confidence that the math scores of grade 3

students attending a rural and urban magnet school will be relatively the same. The t test results indicated that if $\alpha=0.05$ and $p=0.003$, the outcome would determine significant differences. The t test revealed a p value of 0.003, meaning there is a significant difference between grade 4 math scores of students attending a rural and urban magnet school. The results suggest that there is a greater than 95% confidence that the math scores of grade 4 students attending an urban magnet school will be higher. The t test results of fifth graders in both rural and urban magnet schools indicated that if $\alpha=0.05$ and $p=0.48$, the outcome would determine significant differences. The test revealed a p value of 0.48, meaning there is not a significant statistical difference between grade 5 math scores of students in rural and urban magnet schools. The results suggest that there is a greater than 95% confidence that the math scores of grade 5 students attending an urban and rural magnet school will be relatively the same.

Comparative data results of the stakeholders revealed that for 2 consecutive years, students in rural schools were more satisfied with their learning environment. For the year 2017-2018, the satisfaction was statistically the same for both students attending a magnet school in a rural school district and students attending a magnet school in an urban school district. For both magnet schools, parent opinion about the learning environment and the effects it has on the academic achievement of the students indicate they were satisfied with the learning environment and showed a satisfactory increase for the 2016-2017 and 2017-2018 school years. In both groups of parent data, results showed a decrease in satisfaction for the 2018-2019 school year; and comparing the 3 consecutive years included in the research study, teacher satisfaction with the learning environment as it relates to the effects it has on student academic achievement increased

in the rural magnet schools and decreased in the urban magnet school.

This research study examined if students in grades 3-5 attending a magnet school in a rural southern school district achieve higher academic results in reading and math on the SCReady compared to students in another rural and an urban magnet school in the south. This study also examined whether stakeholder groups in rural or urban schools are more satisfied with the learning environment. The researcher discovered that there were no significant differences in the academic performance in reading or math on the SCReady state assessment of students attending a magnet school in a rural school district compared to students attending a magnet school in an urban school district. The significant differences were revealed in the results of the stakeholder groups. The findings indicated that the stakeholders in the rural magnet school district were more satisfied with the learning environment than the stakeholders in the urban school district.

Implications

While there was only one significant difference in math and reading comparisons between rural and urban magnet school student academic achievement results on the state assessment, the data show that students in third and fourth grade in urban magnet schools scored higher than rural magnet school students on the reading end-of-the-year state assessment. Fifth grade urban and rural magnet school students scored the same on the reading end-of-the-year state assessment. The math data collected revealed that third- and fifth-grade students attending rural and urban magnet schools scored relatively the same on the math end-of-the-year state assessment, and fourth-grade students in the urban magnet school scored higher than rural magnet school students on the math end-of-the-year state assessment. The data from stakeholder satisfaction of the learning

environment show that teacher satisfaction increased in the rural magnet schools and decreased in the urban magnet school. The student data reveal students in rural schools were more satisfied with their learning environment for 2 consecutive years. The last year in the study indicates the satisfaction was statistically the same for both students attending a magnet school in a rural school district and students attending a magnet school in an urban school district. Parent satisfaction with the learning environment data results from the rural magnet schools and the urban magnet school showed a satisfactory increase in the first 2 consecutive years with a decrease in satisfaction of the learning environment shown for both parent groups in the last year.

This study was unique because the researcher controlled the variables that may have impacted the results. This control enabled the researcher to gain a better understanding of the academic achievement of those students and stakeholder perceptions of the educational environment in rural or urban schools in the study. The researcher was unable to find any other studies that only examined the test results for students attending a rural magnet school compared to students attending an urban magnet school as well as the opinions of the stakeholders about the learning environment. Most research compares the academic achievement of magnet school students to non-magnet school students. Since the analysis from this study revealed that third and fourth graders in urban magnet schools scored higher than rural magnet school students on the reading end-of-the-year state assessment; fifth-grade students attending urban and rural magnet schools scored relatively the same on the reading end-of-the-year state assessment; third- and fifth-grade students attending rural and urban magnet schools scored relatively the same on the math end-of-the-year state assessment; and fourth-grade students in urban magnet schools

scored higher than rural magnet school students on the math end-of-the-year state assessment, the researcher concluded that two grade levels of academic achievement results in reading were higher than in the urban magnet school. Two grade levels of academic results in math were relatively the same in urban and rural magnet schools. The results indicated that the academic achievement in both rural and urban magnet schools did not show a significant difference in both content areas. The overall opinions of the stakeholders indicated that rural school students and teachers were more satisfied than the students and teachers in an urban school. Parent data results from both rural and urban magnet schools showed a satisfactory increase in the first 2 consecutive years and a decrease for both parent groups in the last year.

The findings from this research study could provide a more in-depth look at the comparison of the academic achievement of magnet school students. The implications that magnet school students perform higher than non-magnet school students have been the only comparison researched. The results of this research study could influence other educators, state, and federal officials in their assessment of the academic achievement of magnet schools compared to other magnet schools in every state. This research study could assist teachers, parents, and other educators with carefully analyzing the academic results of magnet schools to determine best practices in education that may lead to collaborating with other magnet schools on strategies for better results.

The information in this research study can be shared with educational practitioners in the form of professional development, seminars, or local and state training sessions to provide information about the comparison of academic achievement results on a state assessment of one magnet school to another magnet school. For

instance, the results revealed that there was not a significant difference in the academic achievement of students, and this information could assist with helping each stakeholder group understand that neither the school's name of magnet nor the location of the school determines the academic achievement of the students. Still, many other factors can be researched to determine the reason for the outcome. Also, the significant difference in the results of stakeholder satisfaction with the learning environment could be of interest to examine why rural stakeholders are more satisfied with the learning environment in their magnet school than urban stakeholders.

Limitations of the Study

The researcher based her data analysis on information collected from the South Carolina Career-Ready Report Card for each school in the study. The results of the study represent a limited sample size of only three magnet schools from a southern school district. While collecting data, the researcher was employed as a magnet school principal in one of the schools in the study. Due to the limited number of magnet schools in rural districts, her school was chosen to be included in this study. Even so, anonymity was protected, and no identifying references to her school are included in the study.

Since the researcher is connected with the school district that has a school included in the study, her research could be viewed as biased. There was no identifying characteristic of the magnet schools included in the study, and the data collected were proven to be valid and reliable. Schools selected in the study for comparison may have a different variation of the demographic makeup of the magnet school, which could affect the results of the state assessment. This study did not attempt to control these variables.

Delimitations of the Study

The researcher decided to use only three magnet schools in this study, with the focus being on rural and urban elementary magnet schools. The researcher could have included more schools in the study but attaining non-magnet school data would go beyond the scope of the study. The researcher's focus on only a limited number of magnet schools in rural and urban districts helped to answer the research questions that pertain to academic achievement in rural and urban magnet schools. There will be future considerations to study the effects of academic achievement on magnet and non-magnet schools in rural and urban southern districts.

Recommendations for Future Research

This study on the effects of academic achievement of a magnet school program in a rural school district and future results are limited to the sample size of only three schools from a southern school district. A review of literature and a study conducted by the researcher has led to several recommendations for further studies due to the lack of research evaluating the educational outcomes of magnet schools on a national level that may benefit school districts and other magnet schools that are interested in knowing how their magnet school is preparing students for success through their state achievement results compared to other magnet schools in the state and nation. This research study focused on the academic achievement in reading and math for students in grades 3-5 attending only three of the many magnet schools that are located in either a rural or urban school district in South Carolina. The first recommendation would be to expand the study sample size to a variety of magnet themed or focused programs to examine the impact of different magnet school themes on student achievement. Another suggestion

would be to include other variables such as family income, parental involvement, single-parent homes, whether the schools in the study have Title I status, or other factors that may impact student achievement. Future research could expand the data collection to other data collected throughout the year to be used in comparison to the state data to examine the results. Analyzing the data for implications could lead to further inquiry on whether there is a correlation of student academic achievement success in a rural magnet school versus an urban magnet school. Last, a suggested research study can examine urban and rural test scores nationally as well as research why stakeholders of students attending a rural magnet school feel better than urban magnet school stakeholders about the learning environment.

Conclusion

The assumption that magnet schools are the elite schools in a school district because they offer special programs or curriculum that attract students from other neighborhoods will probably never be dispelled. However, the academic achievement results on the reading and math state assessment of students who attend a magnet school in a rural or urban southern school district in this research study revealed that there was not a significant difference in the academic achievement of students, yet the results did show a substantial difference in the results of stakeholder satisfaction with the learning environment.

The researcher recommends future studies be conducted that could include student enrollment, parent involvement, student involvement, and comparison of test results on a national level. Stakeholder satisfaction with the learning environment may have an impact on determining if these factors affect or enhance the academic

achievement of students, even in a magnet school setting; therefore, it is worthy of a future study. These types of studies would focus on the whole child and barriers that may cause their academic achievement to be less than favorable as measured by the state's criteria.

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