

THE EFFECTS OF SES AND DEMOGRAPHICS ON STANDARDIZED TEST SCORES WITH
COMPARISON OF THIRTY RURAL COUNTY SCHOOLS AND THIRTY URBAN COUNTY
SCHOOLS IN THE STATE OF TENNESSEE

Megan L. Dorgan-Carpenter

The Effects of SES and Demographics on Standardized Test Scores with Comparison of
Thirty Rural County Schools and Thirty Urban County Schools in the State of
Tennessee

A Field Study Report
Presented to
The College of Graduate Studies
Austin Peay State University
In Partial Fulfillment
Of the Requirements for the Degree
Educational Specialist

Megan L. Dorgan-Carpenter

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To the College of Graduate Studies:

We are submitting a field study written by Megan L. Dorgan-Carpenter entitled “The Effects of SES and Demographics on Standardized Test Scores with Comparison of Thirty Rural County Schools and Thirty Urban County Schools in the State of Tennessee”. We have examined the final copy of this field study for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Education Specialist.



Dr. Larry Lowrance, Committee Chair



Dr. Gary Stewart, Committee Member



Dr. Donald Luck, Committee Member

Accepted for the Graduate and Research Council



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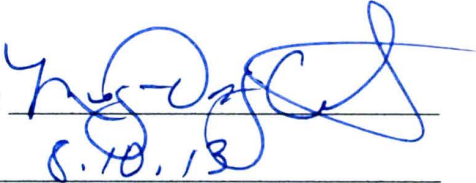
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ACKNOWLEDGMENTS

I would like to express my sincere appreciation and gratitude to my committee chair, Dr. Larry Lowrance. Without his persistence and continual guidance throughout this whole process I would not have accomplished this milestone in my life.

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ABSTRACT

This research was performed by examining data from 60 Tennessee high schools (30 urban, 30 rural) to determine if there was a significant relationship between achievement in rural high schools and that of urban high schools. Archival data using the State of Tennessee Report Card data from 2012 was utilized to determine if there was any statistical significance when examining this variable. Eight focus areas (achievement, accountability, value-added scores, attendance rates, graduation rates, discipline rates, socio-economic status, and teacher quality) of data were gathered from the 2012 report card and a statistical analysis was performed. Using t-tests, significance was found on one (discipline rate) of the eight focus areas. This suggests that even with stricter disciplinary actions (higher suspension rates) in rural schools, there was no relationship in achievement, attendance, SES, value-added scores, accountability, and graduation rates. The more stringent discipline found may have been cultural but did not seem to make a difference in the other areas.

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CHAPTER I

INTRODUCTION

This research looked at Tennessee Report Card data from school districts to determine a descriptive comparison of sixty high schools (thirty urban, thirty rural) focusing on student achievement (three year averages of ACT English, Math, Reading, and Science/Reasoning), accountability progress (Algebra 1 and English II with focus on percentages of below basic, basic, proficient and advanced), value-added scores (ACT English, Math, Reading and Science/Reasoning), socio-economic status, attendance figures, graduation and discipline rates as well as teacher quality. There is thought to be differences in performance between rural and urban schools on such issues. Fan and Chan (1999) wrote an article entitled, “Academic Achievement of Rural School Students: A Multi-Year Comparison with Their Peers in Suburban and Urban Schools,” that studied one of the above areas. “The concern about potential rural-urban differences in education outcomes is not limited to this country, but rather appears to be a global issue.” The Tennessee Department of Education has for years required schools to report such data to examine education quality. This research looked at existing archival data to see if there is a discernable difference in these rural and urban schools. This is one way to test the premise of an expected difference.

Statement of the Problem

To determine a descriptive comparison of 60 high schools in Tennessee, 30 rural and 30 urban, this study focuses on demographics, achievement results, accountability progress, value-added scores, socio-economic status, attendance figures, graduation and

discipline rates, and teacher quality. Both sets of high schools were relatively similar in size; however, one set from urban areas and the other rural. This research examined data available to note any differing trends in student achievement. Any significant difference is noticed in either, it should lead to further research on how one set of schools differ from the other and what is being done differently in order to excel so much more. Could surroundings be influential? For this reason, it is important that school districts, teachers and personnel be aware of their surroundings (rural vs. urban environment, geographic differences, racial composition of the community, economic variables, etc.) and the influence that could be detrimental or supportive to the future of the children within the education system.

Implications of the Study

There should be interest in the results of such a study to parents, possible newcomers to the area looking for the best possible schools for their children, to teachers and administrators in the two school districts studied, as well as researchers interested in Report Card data trends in the State of Tennessee. Rural and urban sociologists should find such a study valuable as well as politicians and stakeholders that fund education in Tennessee and across the nation. Research and reviews of the data by the aforementioned sociologist researchers help determine trends in the areas of focus such as student achievement, discipline, etc. within urban vs. rural areas. Such change, positive or negative, is good to know because it can let you know if there is a problem or concern, allow educators to prepare plans of remediation if there is a problem, allow citizens looking for housing to consider whether rural or urban schools might be better for their

children. Furthermore, this study provides a significant amount of data that can be used for further research. Such implications include identifying trends in rural and urban school districts over a period of time, guiding teachers, students and parents to play a vital role in their students' lives and research that may explore reasons of trends based on urban and rural surroundings.

Research Questions

1. Did high schools with a rural population of students have higher achievement scores than that of a similar urban population of students?
2. Did high schools with a rural population of students have higher discipline rates than that of a similar urban population of students?
3. Did high schools with a rural population of students have higher accountability than that of a similar urban population of students?
4. Did high schools with a rural population of students have higher socio-economic status than that of a similar urban population of students?
5. Did either high school of students have higher value-added scores?
6. Did high schools with a rural population of students have higher attendance rates than that of a similar urban population of students?
7. Did high schools with a rural population of students have higher graduation rates than that of a similar urban population of students?
8. Did high schools with a rural population of students have higher teacher quality percentages than that of a similar urban population of students?

Hypotheses

There are eight research hypotheses this study examined. They were:

1. There will be no statistically significant difference between urban vs. rural schools in achievement scores as identified by the report card data.
2. There will be no statistically significant difference between urban vs. rural schools in discipline referrals of students as identified by the report card data.
3. There will be no statistically significant difference between urban vs. rural schools in accountability.
4. There will be no statistically significant difference between urban vs. rural schools in socio-economic status student achievement.
5. There will be no statistically significant difference between urban vs. rural schools in value-added scores.
6. There will be no statistically significant difference between urban vs. rural schools in attendance rates.
7. There will be no statistically significant difference between urban vs. rural schools in graduation rates.
8. There will be no statistically significant difference between urban vs. rural schools in teacher quality percentages.

Limitations of Study

There may be a difference in the rural and urban population in which the schools exist. Generally one thinks of urban populations as more minority students and rural schools in the south contributing more from farmland economy. I predict a look at the

descriptive data will be revealing of the socio-economic difference and racial compositions of these communities.

Definition of Terms

The following definitions of terms were stated by the National Center for Education Statistics and the Tennessee Department of Education defined them.

1. **Rural (Fringe):** Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal (National Center for Education Statistics, 2012).
2. **Rural (Distant):** Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster (National Center for Education Statistics, 2012).
3. **Rural (Remote):** Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster (National Center for Education Statistics, 2012).
4. **Urban (Large):** Territory outside a principal city and inside an urbanized area with population of 250,000 or more (National Center for Education Statistics, 2012).
5. **Urban (Midsize):** Territory outside a principal city and inside an urbanized area with population less than 250,000 and greater than or equal to 100,000 (National Center for Education Statistics, 2012).

6. **Urban (Small):** Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster (National Center for Education Statistics, 2012).
7. **Report Card Data:** The annual Report Card is a comprehensive showcase of state, district and school-level data for each school year. The Report Card includes demographics, achievement results, accountability progress, value-added data, attendance figures, graduation rate and more (Tennessee Department of Education, 2012)
8. **Above (status):** Students in this school made significantly more progress in this subject than students in the average school in the state (Tennessee Department of Education, 2012)
9. **Administrators:** These are directors of schools, principals, supervisors, assistant principals, etc. (Tennessee Department of Education, 2012)
10. **Attendance:** This refers to the attendance rate, the average numbers of days students attend school as compared to the average number of days the students are enrolled (Tennessee Department of Education, 2012)
11. **Below (status):** Students in this school made significantly less progress in the subject than that of the students in the average school in the state (Tennessee Department of Education, 2012)

- 12. Cohort Dropout Rate:** The percentage of these students entering the 9th grade that has dropped out by the end of the 12th grade (Tennessee Department of Education, 2012)
- 13. English Language Learner:** Non-English speaking students (Tennessee Department of Education, 2012)
- 14. Expulsion:** A student expelled from school is one who is not allowed to attend school for a period of time greater than ten days, and they are removed from school rolls during the period of expulsion (Tennessee Department of Education, 2012)
- 15. Graduation Rate:** The Graduation Rate calculation is based on the US Department of Education 4-year adjusted cohort formula based on the student's year entered ninth grade. Number of cohort members who earned a regular high school diploma by the end of the 2011-2012 school year/Number of first-time 9th graders in fall of 2008 (starting cohort) plus students who transfer in, minus students who transfer out, emigrate, or die during school years 2008-09, 2009-10, 2010-11, and 2011-12. The standard number of years for all students is defined as 4 years plus any summer school terms. This includes the summer school term after 12th grade (Tennessee Department of Education, 2012)
- 16. Highly Qualified Teacher:** Any public elementary or secondary school teacher who holds at least a Bachelor's Degree, is fully licensed in Tennessee and submits the required documents to demonstrate

competency in the content area(s) being taught (Tennessee Department of Education, 2012)

- 17. Suspension:** A student who is not allowed to attend school for a period of time not greater than ten days and remains on the schools rolls (Tennessee Department of Education, 2012)
- 18. Title 1:** Federally funded programs in high poverty schools that target children with low achievement (Tennessee Department of Education, 2012)
- 19. Value-Added:** Value added measures student progress within a grade and subject, which demonstrates the influence the school, has on the students' performance. This reporting provides diagnostic information for improving educational opportunities for students at all achievement levels (Tennessee Department of Education, 2012)

Assumptions

Assumptions of this study were that a significant difference in student achievement, accountability progress, value-added scores, attendance figures, and graduation rates when comparing urban area high schools with rural area school districts would exist. Many people think that the rural high schools will have lower scores, figures, rates, etc. because they tend to profile a rural setting as one being less educated due to their different opportunities and/or lack of resources.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Student achievement has long been recognized as an important factor within our education systems, but whether there is a key relationship of such factors between students in an urban and rural setting is something that has recently come to attention. “For quite some time, a general perception of the comparative inferiority of rural schools has prevailed which implies the existence of rural-urban differences in students’ academic performance” (Fan & Chen, 1999, p.31). The Tennessee Department of Education studies a number of areas to determine such information through a system called Report Card data that is taken annually and calculated into a public database. This database is setup so that schools can be compared if research is wanted (Tennessee Department of Education, 2013). By choosing a certain Tennessee County and a school system within that county, a number of statistics can be found on the school system being studied.

The Report Card database was setup to study the growth of student achievement annually so that problem areas could be fixed. The Tennessee Department of Education utilizes report card data focusing on areas of student achievement, accountability progress, value-added scores, socio-economic status, attendance figures, graduation and discipline rates, teacher quality and career technical education.

The areas mentioned above will be defined as stated on the Tennessee Department of Education Report Card database website (Tennessee Department of Education, 2013). School district administrators, researchers, parents and possible newcomers all have

interest in the monitoring of their student growth overtime, thus the reason for this database to be created and readily available to the public.

Rural and Urban Differences

Traditionally, since rural areas generate less property tax revenue than urban districts and instead rely heavily upon state funding, rural schools have been disproportionately affected by state budget cuts (American Youth Forum Policy, 2010). “The Census Bureau, Office of Management and Budget, and the National Center of Education Statistics (NCES) developed a new education classification system in 2006 that divides schools into one of four general categories: city, suburban, town, or rural” (American Youth Policy Forum, 2010, n.p.). Achieving a rural classification depends on the location of the school to an urban center. According to the National Center for Education Statistics, nationwide, nearly all operating school districts are in rural areas and 10 million children, approximately one-fifth of the nation’s student population-attend a rural school. Furthermore, rural school enrollment is accelerating, and in recent years, a time in which total school enrollment increased by a mere 1%, enrollment in rural districts increased by 15% (American Youth Forum Policy, 2010, n.p.).

“This issue of whether real differences in educational outcomes exist between rural school students and their peers in suburban and urban schools has been a topic of debate among researchers, with particular salience for practitioners in rural areas” (Fan & Chen, 1999, p.32). Fan and Chen state that many factors played a role in possible contributors to the difference between urban and rural settings as noted below. The

factors include availability of resources, rural-suburban-urban differences in socio-economic status, and parental and community involvement.

McCracken and Barcinas (1991) compiled a study on the Differences Between Rural and Urban Schools, Student Characteristics, and Student Aspirations in Ohio. Studying background characteristics, it was concluded that no differences between genders were found but a slight difference in ethnic background was. McCracken and Barcinas also noted that between a rural and urban high school setting, the curriculum differed and most aspirations of the students were of similar choice, to advance their education. “Rural students and urban students differed some in the areas they planned to pursue. They seemed to choose areas they had been able to observe or experience” (McCracken & Barcinas, 1991, p. 38).

Dropout rates between urban and rural students have increased a small percentage since the 1980’s (Jordan, Kostandini, & Mykerezi, 2012). Jordan, Kostandini, and Mykerezi (2012) found that urban and rural school settings have similar dropout rates, as well as similar reasons for dropout, which are:

Gender

Race (in some cases)

Family Assets

Presence of both biological parents

Maternal attributes

Peer Characteristics

Student Achievement

Joetta Sack's article on Class Size, Teacher Quality Take Center Stage at Hearing stated that the most prominent factor to student achievement is the teacher. Ineffective teachers affect students' learning for years to come (Sack, 1999). Gordon Cawelti's research on the practices and programs used by schools has revealed that classroom management skills can substantially improve student achievement (Cawelti, 1999).

1. Practices resulting in substantially improved student achievement (0.4 -0.6 range)

Classroom Management

Time on Task

Behavioral Classroom Techniques

Tutoring

Early Childhood Program

Parental Involvement

2. Practices producing modestly improved student achievement (.3-.4 range)

Success for all

Accelerated Reader Program

Reading Recovery

Staff Development

Longer School Year

Computer-Assisted Instruction

3. Practices with mixed or controversial results

Bilingual Education

Detracting

Class Size

School Size

4. Changes rarely or never showing improved student achievement

Site-based Management

State or District Policies

Pupil Retention

Changes in Schedules or Organization

According to Kupermintz (2002), “A strong belief among policy makers and public as well as private funding agencies is that test scores are directly related to the quality of teaching effectiveness” (p. 40). Many believe this relationship is due to teacher preparation, teacher quality, and student achievement (Ding & Sherman, 2006).

Accountability Progress

Tennessee’s new accountability system is used to meet the requirements of the No Child Left Behind Act (NCLB) (<http://www.nea.org/home/NoChildLeftBehindAct.html>, 2013) and includes the concept of Adequate Yearly Progress or AYP. This system focuses on growth and improvement instead of set school level goals utilized by the schools in previous years with NCLB. The goal of the AYP ensures growth for all students. Tennessee districts are categorized into three areas:

1. Exemplary
2. In Need of Improvement
3. In Need of Subgroup Improvement

Schools are also categorized in three different ways:

Reward Schools: Top 5% for performance

Priority: Lowest 5% for performance

Focus Schools: 10% of schools with largest achievement gaps between groups (race, SES, disability, English language learners) (Tennessee Department of Education, 2013).

Value-Added Scores

The State of Tennessee, Department of Education, explains in detail the Value-Added Assessment System for Tennessee per the website at

http://www.tn.gov/education/assessment/test_results.html.

As noted on the website, Tennessee Value-Added Assessment System (TVAAS) is a statistical analysis of achievement data that reveals academic growth over time for students and groups of students, such as those in grade level or in school. TVAAS data enables feedback for school leaders and teachers on progression of students. It follows student achievement over a period of time and gives a future outlook on their performance. The TVAAS system is determined through different tests and variables over a period of time with focus on student achievement and teacher instruction. Below are some benefits of TVAAS per their website:

Statistical analyses in understandable format

Available via web delivery

Determines growth and growth patterns

Analyzes data from assessments given throughout the year (TCAP, High School End of Course)

The philosophy behind value added scores is that all students should be utilized in this assessment whether significant growth has occurred or not. The reason value-added statistical analysis of student achievement over time works is due to separation between student and school. Separation refers to ethnicity and family background for students, teachers, administrators, and academic programs for schools (TN Department of Education, 2013). As stated by the Department of Education in Tennessee, Value-Added Assessment is fair (http://www.tn.gov/education/assessment/test_results.html):

Fair to administrators and teachers because prior academic achievement data already incorporates the student background characteristics that bias absolute test scores and fair to students because it bases there projected score only on their prior academic record. That ensures that all children are expected to make progress each year from whenever they start. (n.p.)

Value-Added Analysis is being used in the State of Wisconsin to raise student achievement as well. Information on what is being produced for the state enables teachers, principals, and the public to determine the impact on student achievement, as well as, evaluating the instructional approach being utilized. Utilizing this data can be very useful for teachers and the hopes of it being used correctly are a must (Archibald & Ford, 2012).

Socio-economic Status

The American Psychological Association (2013) stated, “socio-economic status (SES) is often measured as a combination of education, income, and occupation” (p. 1).

Low SES is related to lower educational achievement (APA, 2013). Research suggests that students from lower SES families have more trouble academically than that of high SES families (APA, 2013). Home environment, low literacy environment and stress negatively impact student's academic skills (APA, 2013), thus, SES plays a major role on family resources, school environment, academic achievement and health (APA, 2013).

According to Bormann and Rachuba (2001):

Every child has the capacity to succeed in school and in life. Yet for too many children, especially those from poor and minority families are placed at risk by school practices that are based on a sorting paradigm in which some students receive high expectation instruction while the rest are relegated to lower quality education and lower quality futures. (p. iii)

Life chances, income, and well-being are all intertwined to a person's education (Battle & Lewis, 2002). Research tells us that Socioeconomic or SES is a prominent factor in family (Majorbanks, 1996). Jeynes (2002) noted that SES of a student relies heavily on parental educational background, occupations and income. Socio-Economic Status (SES) affects student performance. Lower scores usually are linked to dropouts (Eamon, 2005). This affects opportunities and/or resources and makes for a stressful home environment (Eamon, 2005; Majorbanks, 1996; & Jeynes, 2002).

Rural and urban high schools have different educational outcomes and SES is the influential factor for those outcomes (Fan & Chen, 1999). Jordan, Kostandi and Mykerezzi state that gender, race, family assets, presence of both biological parents, maternal attributes and peer characteristics are predictors of students dropout rate (Jordan et al., 2012).

Attendance Rates

Epstein and Sheldon (2002) stated that “the reduction of student attendance rates has been a continuous goal for many school systems” (p. 308). Continuous absences yield negative results for the students and the school. Students are hindered by the lack of material missing due to high absences; whereas, schools are affected by lower scores in areas of achievement (Epstein & Sheldon, 2002). Past research reveals that early signs of absenteeism have long term affects (Epstein & Sheldon). Epstein and Sheldon (2002) noted that the signs of absenteeism are:

1. Early predictor of dropouts
2. Schools need to stress to students that being in class is important.
3. Educators and families work together to get students to school daily and promptly. (p. 315)

The activities that improve daily attendance and reduce chronic absenteeism are:

Awards to Students

Communications with families

Schools contacts for families

Workshop for parents

After school programs (Epstein and Sheldon (2002)

The National Center for Education Statistics states that teacher absenteeism was more prevalent in urban schools rather than rural schools. Student behavior problems in urban schools were more common and were linked to absenteeism and discipline (National Center for Education Statistics, 2013).

Graduation Rates

According to the National Center for Education Statistics, in 2004, the high school dropout rate between the ages of 16-24 years old was higher in rural areas than urban (NCES, 2004). The following reflects some statistics on dropout rates and ethnicity as noted by the NCES (2007):

White: 10% Rural; 6% Urban

African American: 14% Rural; 9% Urban

Hispanic: no difference found

In 2002-2003, the average graduation rate was higher in rural areas rather than cities; however, it was lower in rural areas compared to urban (NCES, 2007).

A recent study by Johnson, Strange and Madden entitled, *The Rural Dropout Problem: An Invisible Achievement Gap*, focused on 15 southern states with 800 rural districts and found that six out of ten students were expected to graduate (Johnson, Strange, & Madden, 2010).

Discipline Rates

Shepard (2013) stated “even though school violence has decreased since the 1990’s, a presence of security guards and/or police officers is more common in schools” (n.p.). In fact, since the late 1970’s there were very few police officer presences in schools, but by 2007, 70% of schools had a police officer or security guard presence (Dinks et al., 2007). A study entitled *Factors Influencing High School Safety and Security* by Joy R. Tolbert was done to address safety and security issues in Georgia High

Schools. The smallest rate of discipline referrals occurred in schools of less than 500 students while rural area schools had the highest rate of referrals (Tolbert, 2002).

The Gallup Polls of Public Attitudes Toward Education began in 1969 and appeared annually thereafter. According to Gallup, in every year but 1971, discipline was the public's foremost concern. In the late 1960's, pupils sued the schools for violating their constitutional rights due to suspensions without due process. By the 1970's, schools reacted by complying with the legal rulings and developing new due process procedures to protect against further court action. Increasingly disruptive behavior became tolerated in schools, since suspension mechanisms were now under the watchful eye of the courts. Baker and Rubel (1980) stated "this tolerance of disruptive behavior led to increased fear of crimes in schools" (n.p.). According to Dwyer et al, emphasizing a proactive disciplinary approach, clear expectations for students and appropriate behavior have been the focus at the federal level to improve classroom environments and reduce violence (Dwyer, Osher, & Warger, 1998).

Teacher Quality

Wong (1998) noted that the only factor that increases student achievement was the significance of the teacher. Odden and Picus (2011) noted that with a terrible economy and budget cuts to education, teachers are in the midst of a real problem where focus on student growth is a must but the resources are not there. According to the article *What Matters Most: Teaching for America's Future* (1996), the influential report of the National Commission on Teaching and America's Future made teaching the core of its

three simple premises in its blueprint for referring to the nations schools. According to the National Commission on Teaching and America's Future, the three premises are:

What teachers know and can do is the most important influence on what students learn; Recruiting, Preparing, and retaining good teachers is the central strategy for improving our schools; School reform cannot succeed unless it focuses on creating the conditions under which teachers can teach and teach well. (p. 6)

According to the Center for Public Education, teacher quality is not equally distributed among schools and districts (Center for Public Education, 2013). A recent study entitled, *Teacher Effectiveness in Urban High Schools* by Buddin and Zamaro (2009) agreed that teacher quality is not equally distributed among schools and districts especially between low and high achieving schools.

Studies have reflected that these students that have been at a disadvantage when placed with a highly effective teacher for a consecutive time frame were able to maintain the same academic level as their advantaged peers (Learning Points Associates, 2007). The No Child Left Behind Act was put into place with intent to find highly qualified teachers, thus raising student achievement (LPA, 2007). "Teacher knowledge and skill are essential for the improvement in academic achievement of all students – a primary reason the NCLB Act emphasizes teacher quality" (LPA, 2007, n.p.).

CHAPTER III

METHODOLOGY

Research Design

Tennessee's newly funded educational direction, First to the Top, was established to raise student achievement levels and reducing gaps between students. It requires yearly report cards, reports that show achievement and accountability reflecting on the schools and the districts and whether they are meeting their student achievement goals that were set into place. These annual report cards gather data at all levels, state, district, and at the school level. Data gathered each school year includes demographics, achievement results (focus on 3-year ACT averages of English, Math Reading, and Science/Reasoning), accountability progress (focus on percentages in Algebra I and English II looking at below basic, basic, proficient and advanced), value-added scores (focus on ACT scores of English, Math, Reading and Science/Reasoning), attendance figures, graduation rates, teacher quality and career technical education. This study is carried out with test data collected and reported to the state under this act, from the school year 2012, utilizing sixty Tennessee high schools. The data was readily available using the State of Tennessee Report Card Database, which is published for all to see.

In this historical research, the questions of whether urban or rural high schools play significant roles on student achievement, accountability progress, value-added scores, socio-economic status, attendance figures, graduation and discipline rates, teacher quality and career technical education was analyzed.

Participants

For this study, the participants were data files from students in the sixty high schools using archival data sets. These specific high schools were chosen based on their locations (thirty urban and thirty similarly sized rural districts) within the State of Tennessee and data is readily available in a public database of the Tennessee Department of Education, noted as Report Card data. Since 60 random high schools within Tennessee were studied, results may be readily generalizable to other schools in Tennessee or in other states.

These sixty schools reported data collected on students during the target year 2012. Data from these students was obtained from an archival database on the Report Card kept by the State of Tennessee Department of Education and is readily available to the public through its website (<http://www.tn.gov/education/reportcard/>).

Data Collection Procedures

Data studied was reported over a one-year span focusing on the sixty high schools mentioned earlier. The data entered was from the school year 2011-2012.

There was no identifying information gathered such as names related to any specific student. There was no risk to students, for no personally identifiable information was reported or stored within these databases. Confidentiality is not an issue, for this data is confidential from the outset as it is reported to the state. No reader or researcher of this data has access to any confidential information on any specific student. The data was coded and aggregated on the state website to prevent exposure of such information about anyone.

Data Analysis Outline

Data available for this study was collected from the Report Card database from the State of Tennessee Department of Education and community census reports. According to the Tennessee Department of Education, reachable goals are set to improve the education children get in this state. Monitoring student learning is done through data that is gathered yearly and posted easily accessible to the public. Such an accountability system is required by the No Child Left Behind Act and measures abilities to determine achievement and close gaps where groups of students have been failing. Outcomes of this data are categorized as Exemplary, In Need of Improvement and/or In Need of Subgroup Improvement. Report Card data also utilizes state and district TCAP scores. These report cards show demographics, achievement results, accountability progress, value-added data, attendance figures, graduation and discipline rates, teacher quality and career technical education.

The Tennessee Report Card gives information on the following:

Demographics: Demographics include race, gender, limited English proficient, students with disabilities, economically disadvantaged and Title 1 (Tennessee Department of Education, 2012)

Achievement Data: Achievement data are a measure of overall student performance. They include the percentage of students scoring proficient or advanced on the Tennessee Comprehensive Assessment Program, or TCAP, Achievement tests in grades 3-8 and high school End of Course exams. Another achievement measure reported by the state is the ACT test. The overall percentage of students scoring proficient and advanced on achievement data may

differ from accountability data because of the federal accountability requirements related to students with disabilities and English learners (Tennessee Department of Education, 2012)

Accountability Data: Tennessee uses accountability data to track growth and improvement year-over-year. Accountability data include gains on student assessments, gap closure between groups of students and graduation rate. These measures meet certain federal requirements and are used to determine a school or district's accountability status under the state's waiver from the Elementary and Secondary Education Act. The overall percentage of students scoring proficient and advanced on accountability data may differ from achievement data because of the federal accountability requirements related to students with disabilities and English learners (Tennessee Department of Education, 2012)

Value-Added: This is also known as academic growth. This category gives a statistical analysis of achievement data that reveals academic growth overtime and allows feedback to school leaders and teachers on student progress (Tennessee Department of Education, 2012)

Attendance and Graduation Rates: This category gives statistics on attendance rate, cohort dropout, graduation rate, event dropout, subgroups (white, African American, Hispanic, Hawaiian/pacific islander, native American, male, female, economically disadvantaged, students with disabilities, and limited English proficient (Tennessee Department of Education, 2012)

Discipline: This category gives statistics on student discipline in areas of suspensions and expulsions in categories by race and gender (Tennessee Department of Education, 2012)

Teacher: This section gives a breakdown of teacher quality (Tennessee Department of Education, 2012)

Hypotheses Related to Research Questions

Data from Report Card databases was used to answer the research questions stated earlier. Using report card data taken in the year 2012 of 30 random rural and 30 random urban Tennessee high schools, a statistical analysis was run in order to determine whether there are significant differences between a rural high school setting and an urban high school setting in student achievement, accountability of student progress, value-added scores, socio-economic status, attendance figures, graduation rates, and discipline rates. Through the statistical analyses answers to the research questions at hand should be found.

Research Questions

1. Did high schools with a rural population of students have higher achievement scores than that of a similar urban population of students?
2. Did high schools with a rural population of students have higher discipline rates than that of a similar urban population of students?
3. Did high schools with a rural population of students have higher accountability than that of a similar urban population of students?

4. Did high schools with a rural population of students have higher socio-economic status than that of a similar urban population of students?
5. Did either high school of students have higher value-added scores?
6. Did high schools with a rural population of students have higher attendance rates than that of a similar urban population of students?
7. Did high schools with a rural population of students have higher graduation rates than that of a similar urban population of students?
8. Did high schools with a rural population of students have higher teacher quality percentages than that of a similar urban population of students?

Hypotheses

There are eight research hypotheses this study examined. They were:

1. There will be no statistically significant difference between urban vs. rural schools in achievement scores as identified by the report card data.
2. There will be no statistically significant difference between urban vs. rural schools in discipline referrals of students as identified by the report card data.
3. There will be no statistically significant difference between urban vs. rural schools in accountability.
4. There will be no statistically significant difference between urban vs. rural schools in socio-economic status student achievement.
5. There will be no statistically significant difference between urban vs. rural schools in value-added scores.
6. There will be no statistically significant difference between urban vs. rural schools in attendance rates.

7. There will be no statistically significant difference between urban vs. rural schools in graduation rates.
8. There will be no statistically significant difference between urban vs. rural schools in teacher quality percentages.

Statistical Analysis

Archival data gathered from the 2012 Tennessee Report Card was utilized and entered in an EXCEL spread sheet. A number of statistical analyses were calculated to include the Mean scores for Rural and Urban participants in the various categories, the standard deviation, and the p-value on the eight focus areas using multiple *t*-tests. The p-value was set at $p < 0.05$ to determine whether the Null Hypotheses would be accepted or rejected. Through the use of multiple *t*-tests selected as the statistical analysis procedure, this research was able to answer the research questions at hand.

CHAPTER IV

RESULTS

Data Collecting and Recording

The data collected within this study was based solely on archival data from 2012 readily available on the State of Tennessee's Department of Education website and can be found under the 2012 report card data (Tennessee Department of Education, 2013). This data was gathered utilizing 8 of the 9 categories presented on the report card data website which are as follows: socio-economic status, value-added scores, achievement, accountability, attendance, graduation, discipline, and teacher quality.

This report card data is a reflection of Tennessee's First To The Top program, which was instated to raise student achievement and accountability reflecting on schools and districts and whether goals are being met. These annual reports gather data from all levels: state, district, and school level (Tennessee Department of Education, 2013).

Results

The following results were calculated utilizing formulas in Microsoft Excel. The mean, standard deviation and the p-value were calculated. A t-test was run in order to calculate the p-value for each hypothesis analyzed in the study. A p-value of less than .05 was the level needed to reject the null hypothesis.

Hypothesis 1: There will be no statistically significant difference between urban vs. rural schools in achievement scores as identified by the report card data.

Table 1*Achievement by Rural and Urban Districts (ACT English)*

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 19.16 | 1.70 | 0.6132 |
| Urban | 30 | 19.47 | 2.84 | |

$p < 0.05$

Interpretation: The data in Table 1, which reflects the achievement scores for Rural and Urban school districts, indicates that for Hypothesis 1: ACT English, the p-value was 0.6132. Therefore, the Null Hypothesis 1 for ACT English scores between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold.

Additionally, there were no appreciable differences in the ACT English achievement means between the Rural schools and Urban schools.

Table 2*Achievement by Rural and Urban Districts (ACT Math)*

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 18.64 | 1.21 | 0.2849 |
| Urban | 30 | 19.12 | 2.06 | |

$p < 0.05$

Interpretation: The data in Table 2, which reflects the Achievement Scores for Rural and Urban school districts, indicates that for Hypothesis 1: ACT Math, the p-value was 0.2849. Therefore, the Null Hypothesis 1 for ACT Math scores between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold.

Additionally, there were no appreciable differences in the ACT Math achievement means between the rural schools and urban schools.

Table 3
Achievement by Rural and Urban Districts (ACT Reading)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 19.42 | 1.34 | 0.4545 |
| Urban | 30 | 19.81 | 2.45 | |

$p < 0.05$

Interpretation: The data in Table 3, which reflects the Achievement Scores for Rural and Urban school districts, indicates that for Hypothesis 1: ACT Reading the p-value was 0.4545. Therefore, the Null Hypothesis 1 for ACT Reading between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there were no appreciable differences in the ACT Reading achievement means between the Rural schools and the Urban schools.

Table 4
Achievement by Rural and Urban Districts (ACT Science/Reasoning)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 19.25 | 1.21 | 0.3857 |
| Urban | 30 | 19.63 | 2.05 | |

$p < 0.05$

Interpretation: The data in Table 4, which reflects the Achievement Scores for Rural and Urban school districts, indicates that for Hypothesis 1: ACT Science and Reasoning, the

p value was 0.3857. Therefore, the Null Hypothesis 1 for ACT Science and Reasoning between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there were no appreciable differences in the ACT Science/Reasoning means between the Rural schools and Urban schools.

Hypothesis 2: There will be no statistically significant difference between urban and rural schools in discipline referrals of students as identified by the report card data.

Table 5
Discipline by Rural and Urban Districts (Percent of suspensions)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 8.41 | 6.32 | 0.0017 |
| Urban | 30 | 15.98 | 9.93 | |

p < 0.05

Interpretation: The data in Table 5, which reflects the Discipline Referrals for Rural and Urban school districts, indicates that in the urban school districts, the percentage of suspensions is significantly greater than those of the rural schools where the p-value was 0.0017. Therefore, the Null Hypothesis 2 for Percent of Suspensions between the Rural and Urban schools was rejected because the p value was less than the 0.05 threshold. Additionally, there were appreciable differences in the discipline rates between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score for discipline referrals of 8.41 while the Urban schools reported a Mean score of 15.98 for discipline referrals.

Hypothesis 3: There will be no statistically significant difference between urban and rural schools in accountability.

Table 6
Accountability by Rural and Urban Districts (Algebra I: Percent Below Basic)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 12.87 | 5.58 | |
| Urban | 30 | 16.00 | 9.14 | 0.1226 |

p < 0.05

Interpretation: The data in Table 6 reflects the data for Rural and Urban school districts for Hypothesis 3 Algebra I: Percent Below Basic, indicating that the p-value was 0.1226. Therefore, the Null Hypothesis 3 for Algebra I Percent Below Basic between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold.

Additionally, there was no appreciable difference for accountability Algebra 1: Below Basic Percent between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 12.87 while the Urban schools reported a Mean score of 16.00.

Interpretation: The data in Table 7 reflects the data for Rural and Urban school districts for Hypothesis 3 Algebra I: Percent Basic, where the p-value was 0.2407. Therefore, the Null Hypothesis 3 for Algebra I Percent Basic between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no

Table 7*Accountability by Rural and Urban Districts (Algebra I: Percent Basic)*

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 25.90 | 7.63 | |
| Urban | 30 | 28.55 | 9.29 | 0.2407 |
| $p < 0.05$ | | | | |

appreciable difference for accountability Algebra 1: Basic Percent between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 25.90 while the Urban schools reported a Mean score of 28.55.

Table 8*Accountability by Rural and Urban Districts (Algebra I: Percent Proficient)*

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 28.08 | 4.86 | |
| Urban | 30 | 26.84 | 3.94 | 0.2920 |
| $p < 0.05$ | | | | |

Interpretation: The data in Table 8 reflects the data for Rural and Urban school districts for Hypothesis 3 Algebra I: Percent Proficient, where the p-value was 0.2920. Therefore, the Null Hypothesis 3 for Algebra I Percent Proficient between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference for accountability Algebra 1: Percent Proficient between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 28.08 while the Urban schools reported a Mean score of 26.84.

Table 9

Accountability by Rural and Urban Districts (Algebra I: Percent Advanced)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 33.15 | 11.73 | 0.1822 |
| Urban | 30 | 28.28 | 15.46 | |
| p < 0.05 | | | | |

Interpretation: The data in Table 9 reflects the data for Rural and Urban school districts for Hypothesis 3 Algebra I: Percent Advanced, where the p-value was 0.1822. Therefore, the Null Hypothesis 3 for Algebra I Percent Proficient between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference for accountability Algebra 1: Percent Proficient between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 33.15 while the Urban schools reported a Mean score of 28.28.

Table 10

Accountability by Rural and Urban Districts (English II: Percent Below Basic)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 10.12 | 6.02 | 0.8051 |
| Urban | 30 | 10.52 | 6.30 | |
| p < 0.05 | | | | |

Interpretation: The data in Table 10 reflects the data for Rural and Urban school districts for Hypothesis 3 English II: Percent Below Basic, where the p-value was 0.8051.

Therefore, the Null Hypothesis 3 for English II Percent Below Basic between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference for accountability Algebra 1: Percent Proficient between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 10.12 while the Urban schools reported a Mean score of 10.52.

Table 11
Accountability by Rural and Urban Districts (English II: Percent Basic)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 28.82 | 8.10 | |
| Urban | 30 | 26.22 | 10.82 | 0.3001 |

p < 0.05

Interpretation: The data in Table 11 reflects the data for Rural and Urban school districts for Hypothesis 3 English II: Percent Basic, where the p-value was 0.3001. Therefore, the Null Hypothesis 3 for English II Percent Basic between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference for accountability English II: Percent Basic between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 28.82 while the Urban schools reported a Mean score of 26.22.

Interpretation: The data in Table 12 reflects the data for Rural and Urban school districts for Hypothesis 3 English II: Percent Proficient, where the p-value was 0.5334.

Table 12
Accountability by Rural and Urban Districts (English II: Percent Proficient)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 49.61 | 10.75 | 0.5334 |
| Urban | 30 | 48.10 | 7.71 | |
| p < 0.05 | | | | |

Therefore, the Null Hypothesis 3 for English II Percent Proficient between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference for accountability English II: Percent Proficient between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 49.61 while the Urban schools reported a Mean score of 48.10.

Table 13
Accountability by Rural and Urban Districts (English II: Percent Advanced)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 13.22 | 10.41 | 0.4844 |
| Urban | 30 | 15.16 | 10.90 | |
| p < 0.05 | | | | |

Interpretation: The data in Table 13 reflects the data for Rural and Urban school districts for Hypothesis 3 English II: Percent Advanced, where the p-value was 0.4844. Therefore, the Null Hypothesis 3 for English II Percent Advanced between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there

was no appreciable difference for accountability English II: Percent Advanced between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 13.22 while the Urban schools reported a Mean score of 15.16.

Hypothesis 4: There will be no statistically significant difference between urban and rural schools in socio-economic status student achievement.

Table 14
SES Rate by Rural and Urban Districts (Percent of Students)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 29.21 | 29.65 | |
| Urban | 30 | 30.59 | 28.21 | 0.6017 |

p < 0.05

Interpretation: The data in Table 14 reflects the data for Rural and Urban school districts for Hypothesis 4: SES Percent of Students, where the p-value was 0.6017. Therefore, the Null Hypothesis 4 for Percentage of Students based on SES between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference for SES Economically Disadvantaged between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 29.21 while the Urban schools reported a Mean score of 30.59.

Hypothesis 5: There will be no statistically significant difference between urban and rural schools based on value-added scores.

Interpretation: The data in Table 15 reflects the data for Rural and Urban school districts for Hypothesis 5: Value Added English scores, where the p-value was 0.9986. Therefore, the Null Hypothesis 5 for English between the Rural and Urban schools was retained because the p value exceeded the 0.05 threshold.

Table 15
Value Added Scores by Rural and Urban Districts (English)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 19.60 | 2.75 | 0.9986 |
| Urban | 30 | 19.11 | 2.30 | |
| p < 0.05 | | | | |

Additionally, there was no appreciable difference in the Value Added scores for English between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 19.60 while the Urban schools reported a Mean score of 19.11.

Table 16
Value Added Scores by Rural and Urban Districts (Math)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 18.61 | 1.39 | 0.3235 |
| Urban | 30 | 19.11 | 2.30 | |
| p < 0.05 | | | | |

Interpretation: The data in Table 16 reflects the data for Rural and Urban school districts for Hypothesis 5: Value Added Math scores, where the p-value was 0.3235. Therefore, the Null Hypothesis 5 for Math Value Added scores between the Rural and Urban school

students was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference in the Value Added scores for Math between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 18.61 while the Urban schools reported a Mean score of 19.11.

Table 17
Value Added Scores by Rural and Urban Districts (Reading)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 19.47 | 1.63 | 0.4971 |
| Urban | 30 | 19.86 | 2.60 | |

p < 0.05

Interpretation: The data in Table 17 reflects the data for Rural and Urban school districts for Hypothesis 5: Value Added Reading scores, where the p-value was 0.4971.

Therefore, the Null Hypothesis 5 for Reading Value Added scores between the Rural and Urban school students was retained because the p value exceeded the 0.05 threshold.

Additionally, there was no appreciable difference in the Value Added scores for Reading between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 19.47 while the Urban schools reported a Mean score of 19.86.

Interpretation: The data in Table 18 reflects the data for Rural and Urban school districts for Hypothesis 5: Value Added Science and Reasoning scores, where the p-value was 0.5528. Therefore, the Null Hypothesis 5 for Science and Reasoning between the Rural and Urban school students was retained because the p value exceeded the 0.05 threshold.

Table 18*Value Added Scores by Rural and Urban Districts (Science/Reasoning)*

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 19.29 | 1.45 | 0.5528 |
| Urban | 30 | 19.58 | 2.20 | |

$p < 0.05$

Additionally, there was no appreciable difference in the Value Added scores for Science and Reasoning between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 19.29 while the Urban schools reported a Mean score of 19.58.

Hypothesis 6: There will be no statistically significant difference between urban and rural schools in attendance rates.

Table 19*Attendance Rate by Rural and Urban Districts (Percent of Student Attendance)*

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 94.22 | 1.32 | 0.3505 |
| Urban | 30 | 93.81 | 2.07 | |

$p < 0.05$

Interpretation: The data in Table 19 reflects the data for Rural and Urban school districts for Hypothesis 6: Percent of Attendance Rate, where the p-value was 0.3505. Therefore, the Null Hypothesis 6 for Percent of Attendance between the Rural and Urban school

districts was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference in the Value Added scores for Attendance Rate between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 94.22 while the Urban schools reported a Mean score of 93.81.

Hypothesis 7: There will be no statistically significant difference between urban and rural schools in graduation rates.

Table 20
Graduation Rate by Rural and Urban Districts (Percent Graduated)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 90.77 | 7.63 | |
| Urban | 30 | 88.60 | 8.88 | 0.3165 |

$p < 0.05$

Interpretation: The data in Table 20 reflects the data for Rural and Urban school districts for Hypothesis 7: Percent Graduated, where the p-value was 0.3165. Therefore, the Null Hypothesis 7 for Percent Graduates between the Urban and Rural school districts was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference in the Percent Graduated between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 90.77 while the Urban schools reported a Mean score of 88.60.

Hypothesis 8: There will be no statistically significant difference between urban and rural schools in teacher quality percentages.

Table 21
Teacher Quality by Rural and Urban Districts (Percent Core Courses Taught by Highly Qualified Teachers)

| Type of District | N | Mean | Standard Deviation | P |
|------------------|----|-------|--------------------|--------|
| Rural | 30 | 96.53 | 6.30 | 0.2378 |
| Urban | 30 | 97.98 | 2.60 | |

p < 0.05

Interpretation: The data in Table 21 reflects the data for Rural and Urban school districts for Hypothesis 8: Percent Core Courses Taught by Highly Qualified Teachers, where the p-value was 0.2378. Therefore, the Null Hypothesis 8 for Highly Qualified Teachers between the Rural and Urban school districts was retained because the p value exceeded the 0.05 threshold. Additionally, there was no appreciable difference in the Percent Core Courses Taught by Highly Qualified Teachers between the Rural and Urban schools as reflected in the Mean scores. The Rural schools reported a Mean score of 96.53 while the Urban schools reported a Mean score of 97.98.

Chapter 5

Discussion

The study of the Tennessee Report Card of 60 school districts, half rural and half urban, found no significance in seven of the eight focus areas being studied. Discipline rates (percent of suspensions) were found significant. No significant results were found when looking at achievement (ACT English, ACT Math, ACT Reading, ACT Science/Reasoning), accountability (algebra I: percent below basic, algebra I: percent basic, algebra I: percent proficient, algebra I: percent advanced), English II: percent below basic, English II: percent basic, English II: percent proficient, English II: percent advanced), Socio-economic status (Percent economically disadvantaged), Value-Added Scores (English, Math, Reading, Science/Reasoning), Attendance Rate (Percent of student attendance), Graduation Rate (Percent graduated), Teacher Quality (Percent core courses taught by highly qualified teacher).

Why would only one of the eight areas of focus, especially discipline rates, show a significant difference? By studying rural and urban settings, the culture of urban communities reflected in stronger discipline of children could be reflected by the administrative outlook, school policies, and/or school climate and possibly cause these drastic differences noted when reprimanding students in rural and urban settings. While this could easily be a factor in the increase of discipline rates (percent of suspensions) in these respective settings, there seems to be no effect from this discipline difference on achievement as measured by test scores, graduation rates or attendance.

Conclusion

It is the conclusion of this researcher that rural schools across the State of Tennessee are equally doing as well as urban schools in all areas that matter. Achievement, attendance, SES, value added scores, accountability, graduation rates appeared to be not significantly different when looking at rural and urban schools. The only difference shown in this archival study is the area of discipline with urban schools disciplining students more, resulting in more suspensions than rural schools. Having stricter disciplinary actions such as higher suspension rates appears to not have led to any improvement in achievement, attendance, SES, value-added scores, accountability, graduation rates, etc.

Recommendations

Future studies of the issue of differences in rural and urban schools should look at variances in school size. This study controlled for size, using schools of a similar size in both its rural and urban samples. Studies examining these variables of achievement may also want to look at what happens between students of various ethnicities. A look to see if achievement, graduation rates, attendance, discipline, etc. are related to gender would be a good study. There are many areas that could be further researched to delve into differences between rural and urban school settings to look for possible findings, which might improve schools. This amazing database, the Tennessee Department of Education Report Cards, has many uses for creative research to shed light on ways to improve educational achievement.

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APPENDICES

APPENDIX A

Austin Peay State University

IRB Approval Letter

Date: April 5, 2013

RE: Your application regarding study: The effects of SES and Demographics on standardized test scores with comparison of a rural county school and an urban county school in the state of Tennessee.

Dear Megan L. Dorgan-Carpenter,

Thank you for your recent submission to the APIRB. We appreciate your cooperation with the human research review process. Your study has been reviewed and determined not to meet the criteria for research involving human subjects due to the data that will be collected is in the public domain and does not require approval from any institution for its use, further the data cannot be linked to any individual. No further decision is required by IRB regarding the research as described in your application.

This approval is subject to APSU Policies and Procedures governing human subject research should any changes or deviations from the proposed procedures result in contact or collection of data directly or indirectly involving human subjects in which the identity of those human subjects could be obtained and linked to their personal data.

You are free to conduct your study. Please note that any changes to the study must be promptly reported and may require approval before continuing the study. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, you can contact me by phone (931-221-6106) or email (shepherdo@apsu.edu).

Again, thank you for your cooperation with the APIRB and the human research review process. Best wishes for a successful study!

Sincerely,



Omie Shepherd, Chair
Austin Peay Institutional Review Board

Cc: Dr. Larry Lowrance