INEQUALITY AND SCHOOL PERFORMANCE: THE EFFECT OF THE
NO CHILD LEFT BEHIND ACT ON THE TEXAS ASSESSMENT
OF KNOWLEDGE AND SKILLS TEST

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This thesis examined the impact of teacher quality and the socioeconomic status of students on school performance on the Texas Assessment of Knowledge and Skills Test. The data were obtained from the Academic Excellence Indicator System (AEIS) 2005-2006 Report. Disparities in education were used to examine the use of teacher quality in the No Child Left Behind Act of 2001. A multiple regression model was used and included other factors such as socioeconomic status of students, teacher salary, school funding, and student-teacher ratio. Using an ordinary least squares regression, I found that socioeconomic status of students had the most significant impact school performance. Two other variables, teacher salary and student-teacher ratio, had a significant effect on school performance suggesting alternative means of eliminating inequality in education.
ACKNOWLEDGEMENTS

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To my major professor, Dr. Daniel G. Rodeheaver, who provided firm guidance and structure to complete this thesis in a timely and thorough manner I offer a great deal of praise and appreciation.

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CHAPTER 1

INTRODUCTION

Students in the United States are required to perform academically at the same level, but they attend public schools that operate with disproportionate resources (Krieg & Wheelan, 1995; Darling-Hammond, 2004; Valencia, 2000; Anderson, 1993; Roscigno, Tomaskovic-Devey, & Crowley, 2006). Unequal resources inhibit impoverished schools from educating their students to the same level as students in more affluent schools (Anderson, 1993). For instance, impoverished schools are more likely to teach substandard curriculum by less qualified teachers in larger classes compared to affluent schools who teach high quality curriculum by highly qualified teachers in smaller classes (Darling-Hammond, 2004). Although these disparities have been recognized by sociologists and others, they seem to go unnoticed by policy makers.

In 2002, the Elementary and Secondary Education Act of 1965 (ESEA) was revised and became the No Child Left Behind Act of 2001 (NCLB). Its purpose was to improve overall student performance via improvement in teacher quality, suggesting that this would lead, ultimately, to a reduction in inequality in education (US Department of Education, 2004). This argument has had support by educational research that states that “the single greatest effect on student achievement is teacher quality” (US Department of Education, 2004, p.15). However, Entwisle and Alexander (1992) argue that the student’s socioeconomic status is more likely to determine achievement.

Conflicting evidence suggests that teacher quality, the key to NCLB success, may not have the strongest relationship to performance. Even though the US Department of Education (2007) suggests the NCLB has greatly improved performance
in elementary schools, it does recognize that secondary schools continue to fall short in performance. For instance, the Department of Education (2007:2) states:

More reading progress has been made by nine-year-olds in five years (1999-2004) than in the previous 28 years combined; Math scores for fourth- and eighth-graders and nine- and 13-year-olds have reached new heights; and Achievement gaps in reading and math between African-American and Hispanic nine-year-olds and their white peers have fallen to all-time lows.

As for secondary schools, the US Department of Education (2007: 3) notes:

Between 1999 and 2004, reading scores for 17-year-olds fell three points, and math scores fell one point, according to NAEP; [and]… Achievement gaps between Hispanic and white 17-year-olds actually grew wider in both subjects.

Although, educational research suggests that teacher quality is the best predictor of student achievement, sociological literature suggests the socioeconomic status of students is a more likely predictor. The purpose of this thesis is to examine the impacts of teacher quality and the socioeconomic status of students on school performance on the Texas Assessment of Knowledge and Skills Test. Currently, this test is required of all public school students in the state of Texas in order to graduate from high school and is the key measurement of academic success by NCLB. In order to test this thesis, I use a multiple regression model, which also includes other factors such as teacher salary, school funding and student teacher ratio (Figlio, 2002; Levin, 1970; Mayer, 2002, Condron & Roscigno, 2003; Hedges, Laine & Greenwald, 1994; Darling-Hammond, Ancess, & Ort, 2002).
CHAPTER 2
LITERATURE REVIEW

Although the following literature will vary in units of analysis, i.e. individual and school performance, they are believed to be synonymous by the NCLB accountability requirements and will be treated as such in this thesis (Education Trust, 2003).

Inequality and Education

Kreig and Wheelan (1995) describe inequality in education in three categories: poverty, segregation, and school finance. For instance, in the United States, a student’s place of residence determines what school they are to attend. Although students have opportunities to attend other schools, they must have an approved reason to do so by the school district. This act of segregation leads schools in impoverished neighborhoods to educate a large percentage of minority and economically disadvantaged students (Roscigno, Tomaskovic-Devey, & Crowley, 2006). Not only does education policy allow for segregation, but also for disproportionate funding through the regulation of state and local taxes (Anderson, 1993).

As a result, schools in impoverished areas are not only asked to teach a large percent of economically disadvantaged students, but with limited resources (Krieg & Wheelan, 1995; Anderson, 1993; Darling-Hammond, 2004; Valencia, 2000; Roscigno, Tomaskovic-Devey, & Crowley, 2006). For instance, disproportionate funding allows affluent schools to spend more per pupil than impoverished schools (Krieg & Wheelan, 1995; Anderson, 1993; Darling-Hammond, 2004). Spending more per pupil entails higher quality curriculum and materials as opposed to impoverished schools which may
use old textbooks year after year (Anderson, 1993; Darling-Hammond, 2004). In addition, affluent schools are more capable of minimizing class sizes with more qualified teachers compared to impoverished schools who struggle to maintain qualified teachers (Krieg & Wheelan, 1995, Anderson, 1993; Darling-Hammond, 2004; Valencia, 2000). In fact, “as the percentage of economically disadvantaged students increased, the percentage of certified teachers decreased” (Valencia, 2000, p. 453).

Darling-Hammond (2004) equates school inequality to student achievement. She argues that current inequality in education does not allow minority students to access quality education, leading to lower achievement. Valencia (2000, p. 448) supports her argument stating “as minority student percentage increases, there is a tendency for academic performance to decrease.” Therefore, if schools cannot provide a quality education to students most in need, then students will not be able to perform on the same level as their counterparts until changes are made within the school.

No Child Left Behind Act of 2001

Currently, the NCLB is policy makers’ way of trying to minimize inequality in education within the public school system. In fact, the goal is for every student to perform at or above their grade level by the year 2014 (US Department of Education, 2007). The NCLB believes its goal can be achieved by requiring each state to ensure only qualified teachers are in every classroom, which is reported by educational researchers to be the best predictor of student achievement. Teacher quality has been defined by three factors: “a teacher must hold a bachelor’s degree, hold a certification or licensure to teach in the state of his or her employment, and have proven knowledge of
the subjects he or she teaches” (US Department of Education, 2004, p. 15). Each state can add to this definition, but no additions have been found for the State of Texas.

Furthermore, annual assessments are required of each state to monitor academic standards of students that are defined by each state (Education Trust, 2003). In the State of Texas, these academic standards are measured by performance on the Texas Assessment of Knowledge and Skills Test. However, if schools fail to meet their performance standards set forth in their annual progress reports, then improvements are made through additional state funding (Education Trust, 2003). Parents are also notified of these failures and given the opportunity to move their student to a school that is achieving its goals.

In 2007, the US Department of Education reviewed the strengths and weakness of the NCLB and the goals it set. The review found many goals were achieved among elementary and middle schools, but were lacking in secondary schools (US Department of Education, 2007). These failures seemed to have been blamed on not having enough rigorous courses. They proposed a revised policy as the way to improve performance (US Department of Education, 2007). This action seems to contradict the important impact teacher quality has on student achievement, as educational research seems to state. In addition, this action seems to suggest that inequality in education is still ignored. This thesis will examine other variables as described in the following paragraphs to determine the best predictor of improving school performance among secondary schools.
Teacher Quality

As stated earlier, educational research suggests teacher quality, as defined by the NCLB, is the most important factor in determining student achievement. For example, Texas Teaching Fellows (2007) state a shortage of qualified teachers in the state of Texas widens the achievement gap. Goldhaber and Brewer (1997) also support the importance of teacher quality on student achievement. However, an important qualification in their study was their note that clarifies that a teacher must have a degree in the subject area they teach to show any impact to student achievement.

Wimberly, Faulkner, and Moxley (1978) define qualified teachers as effective in relationship to learning achievement. For instance, a teacher must be devoted to their students' learning capabilities and motivate them to reach their full potential. Further research needs to be conducted on this relationship, but a corresponding relationship is noted. (Wimberly, Faulkner & Moxley, 1978).

Although a relationship between teacher quality and student achievement has been supported by the above literature an unclear definition of the term has been proposed. It seems that if a consensus were reached concerning the meaning of the term teacher quality the US Department of Education might more accurately improve performance. In fact, since there is no variable that accurately depicts the term teacher quality as defined by the NCLB, the percent of beginning teacher will be used as a proxy. This variable most accurately corresponds to the requirements set forth by the NCLB for teacher quality.
Influences on Performance

Student-teacher ratio has been widely debated by the education community because the cost of reducing class size has not outweighed the benefits (Wyss, Tai & Sadler, 2007, p. 46). Darling-Hammond, Ancess and Ort (2002) suggest reducing class size might maximize achievement when done in conjunction with reducing pupil loads for teachers. This allows teachers to promote a more intellectual curriculum and the ability to set higher expectations on academic standards (Darling-Hammond, Ancess & Ort, 2002).

The influence of teachers on student performance in the classroom implies that smaller class sizes allow teachers to be more influential. The relationship of influence on teachers will be used to supplement the inadequate amount of sociological literature that supports the relationship of student-teacher ratio to performance. For instance, McDill, Meyers, and Rigsby (1967) and Pugh (1976) state that teachers have a strong influence on students. Pugh (1976) adds that teachers may perceive students differently and teach according to those differences. Another example can be provided by McDill, Meyers, and Rigsby (1967) who state that a school may stress different outcomes for students by offering classes based upon student composition of the school and how many students are believed to do well in such classes. Logerfo (2006) adds that teachers who hold themselves responsible for student learning are more likely to improve student achievement.

Entwisle and Hayduk (1988) also stress the influence of parents on students. For instance, parents who are present in the first few years of beginning school are more likely to influence a student’s performance overall (Entwisle & Hayduck, 1988).
This is similar to Pugh’s (1976) focus on the impact of teacher expectations on student performance. For example, Entwisle and Hayduk (1988) add that teachers who have a strong influence on students usually expect more out of the students, which requires the student to achieve more.

Parental influence can also be used to illustrate the relationship of social class to performance. For instance, many studies have shown that the home environment affects how students perform at school (Coleman, 1968; Entwisle & Hayduck, 1988; Entwisle & Alexander, 1992, Bali & Alvarez, 2003). Coleman (1968) explains that students from low socioeconomic homes are less likely to receive help or support on homework and studies than students in middle and high socioeconomic homes.

Krieg and Storer (2006) state that students’ socioeconomic status influences school performance. For instance, the NCLB allows children from low performing schools who are more likely to be of low socioeconomic status to attend high performing schools (Education Trust, 2003). Therefore, the variation in the socioeconomic status of the student body reflects the changes of school performance (Krieg & Storer, 2006).

Entwisle and Alexander (1992) also attribute performance to socioeconomic makeup because of the educational “retrogression” that occurs among economically disadvantaged youth during the summer (p. 82). Entwisle and Alexander (1992) state learning declines for students from low socioeconomic households because parents provide fewer learning opportunities than students from high socioeconomic households.
Teacher Salary and School Performance

Contradictory evidence has been found concerning the relationship between teacher salary and school performance. Figlio (2002) and Levin (1970) suggest that teacher salaries influence school performance by providing more qualified teachers. Specifically, Figlio (2002) states schools which raise salaries are able to attract more qualified teachers. Turner, Camilli, Kroc, and Hoover (1986) add that salary incentives can also improve performance.

On the other hand, Hanushek, Kain, and Rivkin (2004) and Bruno (1986) note that providing a higher salary to teachers within large inner-city schools has not improved school performance. This may be due in part to high turnover rates large urban schools encounter (Figlio, 2002). However, Bruno (1986) states that retaining qualified teachers in large inner-city schools is the problem and offering extra monetary incentives would retain many qualified teachers in low income schools.

Hanushek, Kain, and Rivkin (2004) suggest improving working conditions rather than raising salaries improvements would more likely retain teachers. Race of students is said to impact the retention of teachers who are fairly new to the career, but more research is needed to determine if changes in school discipline and other safety concerns may offer options to retain teachers (Hanushek, Kain, & Rivkin, 2004). The contradictory evidence concerning the relationship between teacher salary and performance will be evaluated further in this thesis.
The Impact of School Funding on Performance

Mayer (2002) and Condron and Roscigno (2003) suggest that economic segregation between rich and poor neighborhoods contributes to inequality in educational attainment between affluent and impoverished children. For instance, affluent neighborhoods are able to provide more funding to certain schools through local property taxes that may influence performance by spending more per pupil (Mayer, 2002; Condron & Roscigno, 2003). Condron and Roscigno (2003) state that the “most important function of spending is instructional” because it involves teacher salaries (p. 21). Therefore, schools who receive more funding from local tax dollars are able to provide more qualified teachers by luring them from other districts with higher salaries (Figlio, 2002). However, Condron and Roscigno (2003) add that instruction also includes materials and supplies for students that can enhance learning. This thesis will also examine the impact on spending on support services to determine if additional functions for spending per pupil will better predict school performance.

Hedges, Laine and Greenwald (1994) add that the amount of monetary input has a positive effect on school outcomes. However, the findings of this study contradict those of a previous study performed by Hanushek (1989) that states “there is no strong or systematic relationship between school expenditures and student performance” (Hedges, Laine & Greenwald, 1994, p. 6). Mayer (2002) and Card and Krueger (1998) consider the contradictory evidence on school spending and encourages a need for more research.

Teacher quality and socioeconomic status of student were stated to have held the strongest relationship to performance. Additional literature acknowledges a variety
of other variables that hold relationships to performance. Many of the variables were evaluated to the variable of student achievement and will be equated to school performance. Each variable is expected to hold a significant relationship to school performance, with socioeconomic status of the student body to hold the strongest relationship.
CHAPTER 3
METHODS AND DATA

This thesis uses a dataset drawn from the Academic Excellence Indicator System (AEIS) 2005-2006 Report, which holds a variety of information from all Texas public and charter schools to ensure all schools follow state rules and regulations. Most of the data are collected through the Public Education Information Management System (PEIMS) and converted into AEIS reports at the end of every school year. Standardized test scores and tax information are provided by other state agencies. This dataset was chosen from the statewide data resource center for its accessible use and comprehensive data for every school within the State of Texas.

The original dataset from the AEIS 2005-2006 Report includes 7956 schools, but only 1119 public secondary schools are included in this thesis. Secondary schools were chosen because of their lack of performance as stated by the US Department of Education (2007). All charter, elementary, middle, both, and alternative schools were excluded. Schools with a classification of unknown under the charter school variable were also excluded. In addition, schools with a missing value in the dependent variable of school performance were excluded.

Research Design

While educational research suggests that teacher quality is the best predictor of school performance on standardized exams, sociological literature suggests the socioeconomic status of students is a more likely predictor. The purpose of this thesis is to examine the impacts of teacher quality and the socioeconomic status of students on
school performance on the Texas Assessment of Knowledge and Skills (TAKS) Test. Currently, this test is required of all public school students in order to graduate from high school and is the key measurement of academic success by NCLB in the state of Texas. In order to test this thesis, I use a multiple regression model, which also includes other factors such as teacher salary, school funding and student teacher ratio (Figlio, 2002; Levin, 1970; Mayer, 2002, Condron & Roscigno, 2003; Hedges, Laine & Greenwald, 1994; Darling-Hammond, Ancess, & Ort, 2002).

Variable Descriptions

Dependent variable. The dependent variable for this thesis is school performance. School performance is represented by the percentage of non-mobile students who pass all subjects of the TAKS test, as collected by the Texas Education Agency (TEA) Student Assessment Division. Non-mobile students are defined by the TEA Student Assessment Division as students enrolled in the fall semester that test in the same campus in the spring semester (TEA, 2007). In addition, school performance has been equated to student achievement because the NCLB holds schools accountable for student achievement.

Independent variables. The independent variables are: teacher quality, socioeconomic makeup of the student body, average salary of teachers, student-teacher ratio, spending on instruction per pupil, and spending on support services per pupil. Data on the independent variables are collected every year from PEIMS found on the TEA website [www.tea.state.tx.us]. Each school is responsible for collecting and
submitting its own information to their regional education service center (ESC) who 
reviews the data before submission to the TEA (TEA, 2007).

PEIMS provides each school with codes, data information, and deadlines in the 
Data Standards Guide. For example, socioeconomic status of students are collected 
during the school enrollment process by asking parents if they are economically 
disadvantaged or can be based upon student eligibility of the free and reduced lunch 
program (TEA, 2007, p. 13). The use of this relationship is influenced by a variety of 
literature. For example, Hanushek, Kain, and Rivkin (2004) along with Bruno (1986) 
suggest schools with more economically disadvantaged students’ experience a higher 
teacher turnover rate, which affects school performance as Levin (1970) points out.

The variable of teacher quality is used as a proxy for percent of beginning 
teachers with no experience (TEA, 2007, p. 6). Since, the variable of teacher quality is 
not collected by the State of Texas, the variable of percent of beginning teachers will be 
used. Percent of beginning teacher closely meets the definition requirement of teacher 
quality as set forth by the NCLB. The importance of the impact of teacher quality on 
performance is supported by Goldhaber and Brewer (1997) who state that degreed 
teachers who teach subjects in their field produce higher tests scores than teachers 
who are not degreed in the subject area they teach.

The actual salary amount is calculated from teachers performing regular duties 
and does not include supplemental payments. For instance, teachers who also coach 
will only include the monetary amount for performing instructional duties in the 
classroom. Next, “the total salary is divided by the total [full-time equivalent] FTE count 
of staff who receive that salary” (TEA, 2007, p. 6). The literature provided by Hanushek,
Kain and Rivkin (2004) along with Bruno (1986) state social class is more important in determining school performance rather than salary. However, Figlio (2002) and Levin (1970) suggest that teacher salary is more important in determining school performance, regardless of social class.

The variable of student-teacher ratio is calculated by “the total number of students divided by the total teacher FTE count” (TEA, 2007, p. 18). The relationship of student-teacher ratio is being supported by the literature of teacher influence on performance. This relationship implies that the smaller the class size the more influential the teacher is to student performance.

There have been contradictory findings concerning the relationship between school funding and school performance (Mayer 2002; Hedges, Laine & Greenwald 1994; Hanushek, 1989; Condron & Roscigno, 2003; Card & Krueger 1998). Therefore, further classification of school funding will define the remaining independent variables, average spending on instruction and average spending on support services, to determine the strength and importance of the relationship to school performance. Average spending on instruction and average spending on support services are collected from budget information that has been specified by function of spending.

Analysis

The population consists of 1119 secondary public schools. Schools with negative values on the dependent variable were recoded because of a masking procedure the original dataset used for confidentiality reasons. For instance, the schools with a value of -1 for school performance were deleted because of the inability to define the true
numeric value. Schools with a value of -4 for school performance were recoded to its true value of 100.

Once recoding was complete, analyses were conducted. First, frequency distributions and scatter plots were examined. Next, descriptive statistics were computed to further describe each variable. Then, testing for outliers was performed by finding the studentized deleted residual, leverage, plot of studentized deleted residual against leverage, standardized difference in fitted value, cook’s distance, standardized difference in Beta, partial-regression leverage plot, and covariance ratio.

Correlations were evaluated to determine if there was any significant collinearity between variables. The variables spending on instruction and spending on support services seemed to have shown a high correlation and were examined further by calculating the variance inflation factor. The variables of spending on instruction and spending on support services were then centered to determine if these changes would alter results compared to not being centered. An ordinary least square regression model was then performed twice, one model involving the centered variables and one model without. The use of coefficient of determination, betas, and significance of p value were then examined to define the strength and direction of the relationships between each independent variable and the dependent variable.

Limitations

The exclusion of charter and alternative education facilities for lack of TAKS scores was one limitation. For instance, many alternative education facilities have
smaller student-teacher ratios and receive more funding on instruction, which could have effectively been tested if TAKS scores were provided.

The use of percent of beginning teacher will also be a limitation when defining teacher quality because it does not ensure all three criteria of the NCLB are met. For example, the use of alternative certification programs in the state of Texas does not ensure all teachers are certified before they begin teaching.

The population under study presents another limitation because it limits our findings to represent the public schools in the State of Texas and not the United States. However, each state’s own academic standards would also pose a limitation in being generalized to the entire US.
CHAPTER 4

ANALYSES AND RESULTS

Analyses and results will be described in this chapter and were conducted through the use of SPSS 14.0 for Windows which encompassed a series of univariate, bivariate and multivariate procedures.

Descriptive Statistics

Table 1 presents descriptive statistics of every variable used in analyses. Schools had a wide range of performance with an 82 point difference. For instance, the lowest performance was 18% of students who passed all subjects of the TAKS test in one secondary school while the highest performance was 100% of students passed all subjects of the TAKS test in another secondary school. On average, 58.87% of students within Texas secondary schools passed all subjects of the TAKS test in the 2005-2006 school year. Only 52% of schools performed at or above the average level.

Teacher Quality shows that secondary schools on average have a very low percentage 7.4% of beginning teachers in one school. However, 40% of schools had an increasing larger amount of beginning teachers in one school. For instance, 2% of schools had more than a quarter of their staff as beginning teachers. Of that 2%, 1% of schools had more than half of their staff as a beginning teacher.

Schools vary greatly on the percent of economically disadvantaged students in Texas secondary schools, ranging from 0 to 100%, while the average is about 45%. However, at 36% of Texas secondary schools, at least half of their student bodies are
economically disadvantaged. Furthermore, in 4% of these schools, almost the entire student bodies are made up of economically disadvantaged students.

Average salary also has a large range with about a $24,000 difference in salary. One school spends $11,245.48 less than the average ($40,937.28) salary of teachers, while another school spends $13,377.72 more than the average. Student-teacher ratio has a range of nearly 32 students per teacher. On average, there are 13 students per teacher in a classroom in a Texas secondary school. One school places 19 more students in a classroom per teacher than the average.

Spending on instruction per pupil varies from hundreds of dollars to tens of thousands of dollars. Nearly 65% of schools spend at or below the average of $4,500 on instruction per pupil. In addition, there are 1% of schools who spend $10,000 or more on instruction per pupil in the state of Texas. Spending on support services per pupil had a range of not spending any money for support services to nearly $7,000 per pupil. Although 60% of schools spent at or below the average of $319, one percent of schools spent $1,000 or more on support services per pupil.
Table 1

*Variable Characteristics (N = 1119)*

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<td>Independent</td>
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<td>6,831.0</td>
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*Bivariate Statistics*

Table 2 contains correlations between all the given variables. Percent of economically disadvantaged students had fairly low correlations among the variables, but showed no significant relationship to the variables average salary of teachers and student-teacher ratio. However, a negative correlation was found between percent of economically disadvantaged students to student-teacher ratio and to school performance. Teacher quality had lower correlations to the variables as well, with no significant relationship to the variables spending on instruction per pupil and spending on support services per pupil. Negative correlations were found between teacher quality and all other variables.

Average salary of teachers had a significant correlation to all the other variables, except economically disadvantaged students. A strong correlation was found between average salary and student-teacher ratio, but the strength of this correlation was not strong enough to determine the variance inflation factor. Student-teacher ratio also had a significant correlation to all the other variables, except economically disadvantaged students. A moderately strong significance was found between student-teacher ratio and spending on instruction per pupil.

The variables of spending on instruction and spending on support services had a fairly strong correlation of 0.77. This correlation was tested further with a variance inflation factor that shows a value of 4.15 for spending on instruction and a value of 3.33 for spending on support services.

Table 2

Correlations

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<td>Student-Teacher Ratio</td>
<td>-0.11</td>
<td>-0.09*</td>
<td>0.56*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td>Spending on Instruction</td>
<td>0.07*</td>
<td>-0.01</td>
<td>-0.17*</td>
<td>-0.46*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>(6)</td>
<td>Spending on Support Services</td>
<td>0.1*</td>
<td>-0.02</td>
<td>0.07*</td>
<td>-0.07*</td>
<td>0.77*</td>
<td>1.00</td>
</tr>
<tr>
<td>(DV)</td>
<td>School Performance</td>
<td>-0.7*</td>
<td>-0.18*</td>
<td>-0.06*</td>
<td>-0.06*</td>
<td>0.03</td>
<td>-0.06*</td>
</tr>
</tbody>
</table>

Note. DV = Dependent Variable
*p ≤ 0.05. (Two-Tailed Tests).

Multivariate Analysis

The variables of spending on instruction and spending on support services were centered to determine a change in results due to the variance inflation factor of 4.15 for spending on instruction. An additional regression analysis was performed without the centered values and showed no change in results.

Table 3 shows the multivariate regression analyses results from regressing six independent variables on the dependent variable. According to the hypothesis, all variables seemed to have shown a relationship to school performance, with percent of economically disadvantaged students, average salary, and student-teacher ratio to show a significant relationship. Of these three significant variables, percent of economically disadvantaged students shows the strongest statistically significant relationship to school performance ($B = -0.47$, $t = -32.6$, $p < 0.001$, $\beta = -0.71$). Also, the relationship between percent of economically disadvantaged students to school performance appears to be negative. For instance, schools with low performance are more likely to have a higher student composition of economically disadvantaged students.
### Table 3

**Regression Analyses Summary for School Campus Variables predicting School Performance**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE\ B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically Disadvantaged Students</td>
<td>-.47</td>
<td>.02</td>
<td>-.71*</td>
</tr>
<tr>
<td>Teacher Quality</td>
<td>-.08</td>
<td>.05</td>
<td>-.03</td>
</tr>
<tr>
<td>Average Salary of Teachers</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
<td>.06*</td>
</tr>
<tr>
<td>Student-Teacher Ratio</td>
<td>-.76</td>
<td>.15</td>
<td>-.16*</td>
</tr>
<tr>
<td>Spending on Instruction</td>
<td>&lt;.01</td>
<td>&lt;.01</td>
<td>.05</td>
</tr>
<tr>
<td>Spending on Support Services</td>
<td>-.01</td>
<td>&lt;.01</td>
<td>-.04</td>
</tr>
</tbody>
</table>

Note. $R^2 = 0.52$ ($N = 1119$, $p < 0.01$).  
*p ≤ 0.05.

Note: Texas Education Agency Academic Excellence Indicator System 2005-2006 Report
CHAPTER 5
SUMMARY AND CONCLUSIONS

The results of this thesis suggest that disparities of education continue to persist. For instance, instructional spending per pupil can vary from $202 to $57,603, but students are still required to perform at the same level. As stated in the literature, schools that are able to spend more money per pupil are able to provide a higher quality curriculum that expects more from its students, which in turn allows them to perform at a higher level.

Results also suggest that inequality in education is still ignored by policy makers. For instance, if policy makers believed that money did not make a difference in performance as Anderson (1993) suggests, then why are expenditures not regulated on the same level? In addition, it seems quite contradictory to the fact that low performing schools receive additional funding through Title I programs to help them perform at a higher level (Education Trust, 2003).

On the other hand, policy makers cannot be at fault when they depend on educational researchers to find evidence that supports policy reform. Results of this thesis did not support the educational research implications of the significance teacher quality holds to performance. In fact, the regulation of the variable teacher quality by the NCLB would suggest that policy makers say they are attempting to make efforts toward improving inequality in education when in fact they continue to ignore it. For instance, the variable of teacher quality as defined by the NCLB is not monitored at the state level. In this thesis, percent of beginning teacher was used as a proxy for the variable teacher quality because there was no variable available in the dataset that more closely
measured teacher quality. Therefore, it seems the NCLB is said to be making efforts toward ensuring qualified teachers are in every classroom, when in fact the lack of monitoring of the variable shows a lack of effort to do so.

In this thesis, results may also suggest the definition of teacher quality as stated in the NCLB is so broad that improvements in student achievement cannot be met with the use of this term. For instance, qualified teachers are still absent in the classroom. In fact, the higher percentage of staff that is a beginning teacher the more likely the lower school performance results. This would suggest that if teachers were only to need a degree and certification, then teacher quality as defined by NCLB will make no improvement toward school performance.

The literature has also stated the difficulties low performing schools face in maintaining qualified teachers. For instance, the state of Texas uses alternative certification programs to fill the shortages of teachers in the classroom. This would support the literature by Bruno (1986) that states qualified teachers are less likely to be retained in large inner city schools. These difficulties faced by many low performing schools may pose a great challenge for policy makers and may explain why teacher quality is not monitored at the state level and efforts are not made to ensure qualified teachers are in every classroom. These findings would propose contradictory evidence to education research that suggests that teacher quality is the best predictor of school performance. However, in order for this relationship to be properly evaluated, the accurate variable for teacher quality must be depicted for researchers.

The purpose of this thesis is to examine the impacts of teacher quality and the socioeconomic status of students on school performance on the Texas Assessment of
Knowledge and Skills Test. A multiple regression model was used and included other factors such as teacher salary, school funding and student-teacher ratio (Figlio, 2002; Levin, 1970; Mayer, 2002, Condron & Roscigno, 2003; Hedges, Laine & Greenwald, 1994; Darling-Hammond, Ancess & Ort, 2002).

Results support the sociological literature that states socioeconomic status of the student is the better predictor of performance. As stated earlier, students from a low socioeconomic status are more likely to encounter inequalities of education because they are segregated into schools that are unable to provide qualify education (Krieg & Wheelan, 1995). Educational researchers may have overlooked this relationship because Krieg and Storer (2006) suggest schools have no control over socioeconomic status of students. However, the significance between student-teacher ratio and average salary of teachers to school performance would argue that schools do have control over performance. For instance, results show larger student-teacher ratios are more likely to produce lower school performance. Therefore, the regulation of student-teacher ratios seems to be beneficial when trying to improve school performance.

Although, contradictory evidence for the variable of salary for teachers and its effects to performance the relationship is still seen as a positive one. For instance, as salary increases for teachers the more likely student achievement is to increase.

In closing, inequality in education can be eliminated and efforts to do so should begin in the following areas: resolving segregation issue, lowering student-teacher ratios, and increasing salaries for teachers.
REFERENCES


