The Relationship between the Conditions of Rural High School Facilities and Certain Educational Outcomes

Abstract

In the era of high stakes accountability, educational leaders must explore all factors that affect student achievement. If the condition of facilities in some schools is such that the schools cannot provide a quality education for its students equal to that of other schools, then equal educational opportunity may not be available for all children. The purpose of this study is to examine the relationship between the condition of rural public high school facilities in Texas and the educational outcomes of student achievement, student attendance, and teacher turnover, while considering the effects of the demographic variables of student wealth level (percentage of economically disadvantage students), school district wealth level (property value per student), and percentage of minority students. The measures for the condition of facilities variables used in this study were obtained from the 2006 Texas Comptroller’s Facility Survey of the 1,037 public school districts in Texas. The participants for this study were all from the 73 rural public high schools that responded to the survey. The measures for the demographic variables and educational outcome variables used in this study were obtained from the 2006 Academic Excellence Indicator System (AEIS) report from the Texas Education Agency. Multiple regression analyses were utilized to examine which selected condition of facility variables and demographic variables best predicted certain educational outcomes. This study found that the condition of school facilities does affect student achievement, teacher turnover, and student attendance, particularly when found in schools made up of primarily low-income students. A large percentage of portable classrooms lowers student achievement and leads to higher teacher turnover. Overcrowded schools lead to lower student achievement and lower student attendance rates. A large amount of deferred maintenance leads to lower student achievement. Excellent facilities for children who need them the least and inadequate facilities for the ones who need them the most violates the principal of equal educational opportunity for all. Equitable public education is the civil rights issue of the 21st century. Policy makers and educational leaders have a responsibility for providing a quality education system for all children.

Introduction and Problem Statement

The mission of public education in Texas is to “ensure that all Texas children have access to a quality education that enables them to achieve their potential and fully participate now and in the future in the social, economic, and educational opportunities of our state and nation” (Texas Education Code, Chapter 4.001). Quality school facilities for the privileged and inadequate school facilities for the disadvantaged undermine the mission of the Texas Education Code.

The vision of the original Common School Movement stressed the need for a public school system that “generates the informed citizenry needed for democratic government, embraces the welfare of all children in the nation, upholds the ideal of equal opportunity, and
stresses the belief that public education can and should provide a level playing field” (Biddle & Berliner, 2002, p. 58).

**Statement of the Problem**

Many people believe that education and learning can happen anywhere. Place does not matter. A good teacher can teach students no matter what the setting. Although there is some validity to these statements, researchers are beginning to find that place does matter. An extensive review of literature suggests that the school environment may have as much effect on student achievement as the influences of family background, socio-economic status, school attendance, and behavior combined (Lyons, 2001). One study noted that the school is a “physical representation of a public message about the value of education” (Cash, 1993, p. 83). This study adds to the body of research literature by exploring the possible relationship between the condition of school facilities and certain educational outcomes, particularly in rural high schools.

**Significance of the Study**

This study is important, because there have been very few studies done in Texas on the relationship between the condition of school facilities and certain educational outcomes. This study is the first of its kind to use data collected in a survey of all of the school districts in the entire state of Texas conducted by an official state agency, the Texas Comptroller of Public Accounts.

Educational leaders are constantly trying to find ways to increase the academic achievement of their students. Earthman (1998) found that there is an educational disadvantage of 5 to 17 percentile points on standardized tests for students housed in poor quality facilities compared to high quality facilities. School officials do not have much control over some factors that may impact student achievement. However, the condition of school facilities can be controlled by school officials. Improving the condition of school facilities is one way that educational leaders can have a positive impact on student learning and academic performance.

**Theoretical Framework**

A theoretical model showing a relationship between the condition of school facilities and student outcomes was first designed by Cash (1993). The theoretical model in this study utilizes a simplified version of Cash’s basic model, but adds the variable Teacher Turnover as one of the educational outcomes (Figure 1).

**Purpose of the Study**

The purpose of this study is to examine the relationship between the condition of rural public high school facilities in Texas and the educational outcomes of student achievement, student attendance, and teacher turnover, while considering the effects of the demographic variables of student wealth level (percentage of economically disadvantage students), school district wealth level (property value per student), and percentage of minority students.
Research Question

What is the relationship between the condition of school facilities and certain educational outcomes, particularly in rural Texas public high schools?

Review of the Literature

Condition of School Facilities

The condition of school facilities nationwide is one of deterioration and obsolescence. President Bill Clinton, in his 1997 State of the Union Address, stated that “we cannot expect our children to raise themselves up in schools that are literally falling down. With the student population at an all-time high, and record numbers of school buildings falling into disrepair, this has now become a serious national concern” (Clinton, 1997, para. 39).

The National Center of Education Statistics (1999) reported the average age of public school buildings in the United States in 1998 was 42 years old. School buildings begin rapid deterioration when the buildings are over 40 years old, and most schools are abandoned after 60 years (Ornstein, 1994).

In 1995, the General Accounting Office conducted a survey of the facilities needs of school districts in the United States. The study documented widespread physical deficiencies in many school facilities across the country. One of the most disturbing findings was that the most likely students to attend the most inadequate facilities were the academically neediest students—minorities and low-income students (General Accounting Office, 1995).

Older school facilities are more prevalent in schools with a higher percentage of low-income children than those with a higher percentage of high-income children. A higher proportion of children in poverty enroll in the oldest school buildings in the United States. Twenty percent of schools with high-income students were built before 1950. However, 33% of
schools with low-income students were built before 1950 (National Center for Educational Statistics, 1999).

**Overcrowded Facilities**

The National Center for Educational Statistics (2000) reported that one in four public schools are overcrowded. Earthman (2002) found that overcrowded school facilities have a negative influence on student performance of low-income and minority students.

In a survey of teachers in overcrowded New York City public schools, teachers said that overcrowding and lack of space was a higher priority to address than sanitation, maintenance, violence, and other issues. Seventy percent of the teachers also said that overcrowding was leading to staff burnout (Rivera-Batiz & Marti, 1995).

**General Condition**

As the condition of school facilities improve, so do the average student achievement scores. A study of public schools in the District of Columbia in 1991 found that as a school facility improved its general condition from poor to excellent, the average achievement score increased 10.9 points (Earthman, 2004).

A study of rural high schools in Virginia compared the ITBS scores of students with the condition of school facilities. The condition category of the facilities were substandard, standard, and above standard. The study found that test scores of students in school facilities rated as above standard were as many as five percentage points above the scores of students in school facilities rated as poor (Cash, 1993).

**Portable Classrooms**

Chan (2005) studied the use of portable classrooms in 11 Georgia elementary schools and found the physical conditions of portable classrooms were inferior to that of permanent classrooms. Most of the portable classrooms in the study were poorly configured, lacked internet access, and were overcrowded.

The use of portable classrooms to address overcrowded conditions in schools affects property-poor school districts to a greater degree than property-wealthy school districts. In a study of Nebraska school facilities, Pool (1993) reported that school districts with low property value per student had more portable facilities than school districts with high property value per student.

**Age of School Facilities**

More students in rural areas attend schools with school facilities over 50 years old than do students in suburban areas. In addition, schools with an enrollment of over 50% low-income students generally have older facilities than do schools with an enrollment of less than 50% low-income students (National Center for Education Statistics, 1999).

Bowers and Burkett (1988) studied the relationship of school facility age and student achievement using two elementary school facilities from the same school district in rural
Tennessee. Bowers and Burkett (1988) concluded that a relationship did exist between the physical environment and student achievement, health, attendance, and behavior.

**Number of Years since Last Renovation**

One of the most reliable indicators of the true age of school facilities is the number of years since its last major renovation. The age of school facilities is usually an accurate indicator of the condition of the facilities. Older school facilities do not usually have the building features of newer school facilities such as adequate classroom spaces, new technology infrastructure, and energy efficient environmental systems. However, major renovation of older school facilities can transform obsolete facilities into school facilities that are comparable to the newest facilities. The lack of major renovation of older school facilities greatly restricts the school’s ability to meet the current needs of students.

Schools that have not renovated older facilities in recent years will face difficulty in improving their educational programs. The National Center for Education Statistics (1999) reported statistics on the year that schools underwent their last major renovation. About three-fourths of public schools in America have undergone at least one major renovation. Seventeen percent of schools reported last undergoing a major renovation prior to 1980; 17% reported the last major renovation between 1980 and 1989; and 39% reported the last major renovation between 1990 and 1995. The study reported that the year since the last major renovation is not significantly related to student enrollment, locale, or region.

The date of the last major renovation is important for policymakers to consider when evaluating whether or not school facilities are equipped to meet world class standards. Older school facilities must be renovated to allow for new technology infrastructure, adequate space for new instructional techniques, and energy efficient environmental systems.

**Deferred Maintenance**

Many school districts facing aging facilities simply put off performing critical facility maintenance and upgrades due to a lack of funding. Deferred maintenance will result in higher facility construction costs over time and, ultimately, will result in inadequate educational facilities for children (Rees, 2004).

Deferred maintenance is a concern, especially for rural school districts. Rural school districts are constructing new school buildings and upgrading old ones at a slower rate than non-rural districts. From January 1994 to June 1998, about “21 percent of districts in urban areas constructed at least one new school compared to only nine percent of districts outside of urban areas” (Dewees & Earthman, 2000, p. 12).

Rural school districts have little capacity to support bonds that fund facilities upgrades. Rural districts are in communities with small population, inadequate tax bases, and regulatory limits to their debt. These factors “restrict their ability to generate the revenues required to build school facilities” (Dewees & Earthman, 2000, p. 11). A declining enrollment translates into fewer taxing citizens. Fewer taxpayers mean less revenue capacity available for supporting bonds to update facilities.

In Texas, state statutes prohibit some small, rural school districts from incurring debt sufficient to replace existing facilities. Long-term debt for school districts that receive state
assistance from the Instructional Facilities Allotment is limited by the greater of $100,000 per year or $250 per student in average daily attendance per year (Texas Education Agency, 1997).

Some small school districts may not have the capacity to incur the debt they need because of the lack of student population. Small schools that receive state assistance by participating in the Existing Debt Allotment program are limited to a debt tax rate that may not exceed $.29 per $100 of valuation (Texas Education Agency, 1999).

Policy makers must address the difficulty rural schools face with regard to facilities, or these school districts will continue to put off critical facility upgrades. Many rural schools have facilities that are in great need of repair or replacement; yet, some school districts lack the capacity to raise the necessary funds to solve these facilities’ needs. This lack of capacity contributes to the inequities in school facilities funding (Texas Education Agency, 1997).

Demographic Characteristics of Schools

**School district wealth level.** The quality of school facilities should not depend on the wealth of the local community. However, public schools in Texas receive more than half of their funding from local property taxes. High-wealth school districts have more capacity to finance major facility renovations and new facilities than low-wealth school districts. When school facilities funding is based on local property wealth, there will be inequities in the condition of the school facilities. Low-wealth school districts tend to have relatively high tax rates and low education expenditures, while high-wealth school districts tend to have low tax rates and high education expenditures.

Low-wealth school districts face a greater challenge of updating school facilities than schools in more affluent districts. A survey of school principals in New Jersey revealed significant disparities in the overall condition and overall educational adequacy in low-wealth school districts when compared to other school districts (Schneider, 2002).

**Minority students.** Pastor and Reed (2005) examined school facilities in California and found that there are three times more minority students enrolled in critically overcrowded schools than white students. Overcrowding is an important condition of school facilities, because Earthman (2002) found that overcrowded school facilities have a negative effect on student performance of minority students.

Texas must allocate the educational resources necessary to provide equal educational opportunity to minority children. It is very difficult to say that all children have equal educational opportunities when resources are distributed inequitably for minority children.

Earthman (2002) found that old, inadequate, and overcrowded school facilities have a negative influence on student performance of low-income students. Poor conditions of school facilities constitute major barriers in education that directly affect opportunities for low-income students to learn and achieve at levels equal to those of other students.

**Rural school facilities.** Texas has the “largest number of rural students attending the largest number of rural schools” (Stern, 1994, p. 15). One of the critical building features that rural schools lack is the infrastructure necessary for modern technology. Nearly half of rural schools have six or more unsatisfactory technology elements (Dewees & Earthman, 2000).
Educational Outcomes

**Student achievement.** Several studies have shown that there is a relationship between the condition of school facilities and student achievement. A study of the Houston ISD reported that schools with roofs in ruin, schools that rely on temporary buildings instead of permanent structures, and schools with understaffed custodial services provide an environment where students are less likely to attend school and more likely to drop out (Branham, 2004).

**Teacher turnover.** The quality of a school’s infrastructure may have a significant impact on teacher retention and teacher turnover. Buckley, Schneider, and Shang (2004) found that the impact of facility improvement on teacher retention is equal to or greater than the impact of pay increases for teachers. Studies of teacher satisfaction in developing nations also show that improvement in the quality of facilities was found to offset low wages. School districts with inadequate facilities are less likely to attract and retain teachers (Schneider, 2004).

**Student attendance.** One of the first studies on the relationship between the condition of school facilities and student attendance concluded that there was a relationship between the condition of school facilities and student achievement (Bowers & Burkett, 1988).

Branham (2004) also concluded that a school that utilizes at least 5% of its total facilities as temporary facilities can expect to lose one student per day in student attendance more than a school of the same size without temporary facilities. Working conditions of employees in overcrowded school facilities are stressful and unpleasant, resulting in the high rate of absenteeism (Corcoran, Walker, & White, 1988).

Methodology

Description of Data

**Participants in the study.** Participants in the Comptroller’s study included small Rural and Non-Metro: Stable public high schools in Texas, as defined by the Texas Education Agency. These school districts were selected from the sample of school districts responding to the 2006 Texas Comptroller’s Facility Survey. The Texas Education Agency defines Rural and Non-Metro: Stable schools as follows:

Rural is the classification of school districts that either have a growth rate less than 20 percent and the number of students in membership is between 300 and the state median or the number of students in membership is less than 300.

Non-Metro: Stable is the classification of school districts that are not major urban, suburban, towns over 25,000 population, or in a fast-growth area, yet have a number of students in membership that exceeds the state median.

(Texas Education Agency, 2006, para. 1)

The participants in this study included small rural and Non-Metro: Stable public high schools in Texas (referred to as Rural in this study). These school districts were selected from the sample of school districts responding to the 2006 Texas Comptroller’s Facility Survey. The Comptroller’s Survey was sent to all 1,037 public school districts in Texas. There were a total of 309 school districts that responded to the survey. These school districts represent 48.1% of the state’s student population.
The Comptroller’s Study utilized several categories as the Primary Use of Facility. Examples of different Primary Uses include Instruction, Administrative, Warehouse, Extra-curricular, etc. Only data from facilities under the category of “Instruction” were used in the data analysis for this research. There were no extra-curricular facilities, warehouses, storage facilities, etc. used in this study unless they were a part of the high school building.

There are a total of 137 small rural school districts in Texas. Of these 137 school districts, 64 schools house multi-grade classrooms from Kindergarten through 12th grade in a single facility. This study eliminated these schools, because student achievement data in these schools is combined together with other grade levels to make a single campus.

There were 73 districts that house their high schools in separate facilities from other grade levels. These 73 high schools represent 53% of the small, rural high schools in Texas. These high schools separate their student achievement data from the rest of their school campuses. This study used only data from these 73 high schools.

Power Analysis for this study is strengthened by previous research in this area. Carpenter (1996) suggested that studies involving similar school districts in terms of geographic locations, student demographics, available funds, and school size might provide a better data fit with a smaller sampling error than the large sample size studies. Although this is a relatively small sample size for a research study, 73 high schools are appropriate for this study because these similar districts will provide a quality sample for determining the relationship between the condition of school facilities and educational outcomes.

**Data collection method.** Data used in this study were collected by a survey instrument developed by the Texas Comptroller of Public Accounts, in collaboration with representatives from the Texas Association of School Administrators (TASA), Texas Association of School Boards (TASB), Texas Association of School Business Officials (TASBO), the Texas Education Agency (TEA), the executive directors of the state’s 20 Regional Educational Service Centers (RESCs), and individuals with facilities expertise. The 2006 Academic Excellence Indicator System (AEIS) report from the Texas Education Agency provided the demographic data, teacher turnover, student attendance, and student achievement for each high school.

The Texas Comptroller of Public Accounts sent a letter to all public school districts and charter schools in Texas on May 1, 2006, announcing the survey and directing the schools to the online survey questionnaire.

The facility inventory survey was submitted via e-mail in an Excel spreadsheet format. The survey was available online on the web site of the Texas Comptroller of Public Accounts from May 1, 2006 through August 15, 2006. The Comptroller’s staff members called over 500 school districts in late June requesting their participation and offering assistance. Although the survey was voluntary, there were several attempts by the Comptroller’s staff to encourage school district personnel to respond to the survey. There were 309 public school districts and charter schools that responded to the Comptroller’s request. Seven responses included partial responses and were not included in the results. One school response was a non-taxing entity, and it was not included in the results.

**Data Analysis Methods**

The study used multiple regression to explore selected school facilities variables and demographic variables (General Condition of School Facilities, Percent Portable to Total Permanent Square Feet per Student; Percent Capacity, Average Age of Facilities, Number of
Years Since Last Renovation, Percent Deferred Maintenance, Property Value per Student, Percent Economic Disadvantage Students, and Percent Minority Students), which were hypothesized to attribute to the variations in the educational outcomes (Student Achievement, Teacher Turnover, and Student Attendance).

Results

Data Analysis Using Multiple Regression Analyses

The results in the following sections present an evaluation of which condition of facilities variables and demographic variables best predict Student Achievement, Teacher Turnover, and Student Attendance.

The selected condition of facilities variables were hypothesized to attribute to the variations in certain educational outcomes. The predictor variables included: General Condition of School Facilities; PercentPortable to Permanent Square Feet per Student; Percent Capacity; Age of Facilities; Number of Years Since Last Renovation; Deferred Maintenance; Property Value per Student; Percent Economic Disadvantage Students; and Percent Minority Students. The criterion variables included: Student Achievement (Average TAKS Scores), Teacher Turnover (Average Years Experience of Teachers with District), and Average Student Attendance.

Student Achievement (Average TAKS Scores)

The first criterion variable examined in this study using multiple regression analysis was Student Achievement as measured by Average TAKS Scores. Multiple regression results indicated that the linear combination of one demographic variable and four condition of facilities measures was significantly related to Average TAKS Scores, $F(5,67) = 11.267, p < .05$. The total R Square of .457 for the sum of these predictors indicates that, taken together, the inclusion in the regression equation of Percent Economic Disadvantage Students, Average Age of Facilities, Percent Portable to Permanent Square Feet, Percent Capacity, and Percent Deferred Maintenance contributed 45.7% of the variance in Average TAKS Scores.

Student income level. The demographic variable, Student Income Level, as measured by Percent Economic Disadvantage Students, accounted for most of the variance in the Average TAKS Scores. The resulting R Square Change of .284 for the low-wealth students indicates that approximately 28% of the Average TAKS Scores can be accounted for by the percentage of low-income students, $F(1,71) = 28.096, p < .05$.

As the percentage of low-income students increases, the average TAKS scores decrease, $r(73) = -.532, p < .01$. Most researchers would agree that it is not surprising that about one-fourth of the variance in average TAKS scores can be accounted for by the percentage of low-income students in the high school.

Condition of facilities. Four conditions of facilities measures predicted Average TAKS Scores significantly over and above the low-income students. The first of these facilities variables was Average Age of Facilities. The resulting R Square Change of .042 indicates that
approximately 4% of the variance in Average TAKS Scores can be accounted for by the Average Age of Facilities, \( F(1,70) = 4.407, p < .05 \).

The second condition of facilities measure that was found to be significant during the multiple regression analysis was the Percent Portable to Permanent Square Feet per Student. The resulting R Square Change of .050 indicates that approximately 5% of the variance in Average TAKS Scores can be accounted for by the percentage of portable space per student, \( F(1,69) = 5.508, p < .05 \).

The third condition of facilities measure that was found to be significant during the multiple regression analysis was the Percent Portability of Permanent Square Feet per Student. The resulting R Square Change of .050 indicates that approximately 5% of the variance in Average TAKS Scores can be accounted for by the percentage of portable space per student, \( F(1,69) = 5.508, p < .05 \).

The fourth condition of facilities measure that was found to be significant during the multiple regression analysis was the Percent Capacity (overcrowding). The resulting R Square Change of .038 indicates that approximately 4% of the variance in Average TAKS Scores can be accounted for by overcrowding, \( F(1,68) = 4.442, p < .05 \).

The multiple regression analysis did not find the other predictor variables statistically significant as predictors for Average TAKS Scores.

**Teacher Turnover (Average Years Experience of Teachers with District)**

The second criterion variable examined in this study using multiple regression analysis was Teacher Turnover. Average Years Experience of Teachers with District was used as a proxy for Teacher Turnover. Teacher Turnover is not reported at the high school level by the Texas Education Agency (TEA). However, the Average Years Experience of Teachers with District for each school is reported by TEA. Since there is only one high school in every school district in this study, Teacher Experience with District can serve as a proxy for Teacher Turnover.

The multiple regression analysis found that the first significant condition of facilities measure was Percent Portable to Permanent Square Feet per Student. The resulting R Square Change of .062 indicates that approximately 6% of the variance in teacher turnover can be accounted for by the percentage of portable to permanent square feet per Student, \( F(1,70) = 4.728, p < .05 \).

The second significant condition of facilities measure was Average Age of Facilities. The resulting R Square Change of .073 indicates that approximately 7% of the variance in teacher turnover can be accounted for by the average age of facilities, \( F(1,70) = 5.951, p < .05 \).

**Other predictor variables.** The other predictor variables did not show a significant correlation with teacher turnover.

**Student Attendance**

The third criterion variable examined in this study using multiple regression analysis was Average Student Attendance.

Multiple regression results indicated that there was only one measure, Percent Capacity (Overcrowding), that was significantly related to Average Student Attendance, \( F(1,71) = 5.382, p < .05 \). The resulting R Square Change of .070 indicates that approximately 7% of the variance in Average Student Attendance can be accounted for by Overcrowding in school facilities.
Other predictor variables. The other predictor variables did not show a significant correlation with average student attendance.

Summary, Discussion, and Conclusions

It is sometimes difficult to generalize the findings in a study such as this to other school districts across the nation. However, because this study used a sample of high schools taken from the entire population of public small rural high schools in Texas, the findings can realistically be generalized to other small rural high schools across the United States.

Student Wealth Level

In this study, low-income students accounted for approximately 28% of the variance in average TAKS scores. Student wealth level is frequently noted as one of the main contributors to the variance in standardized test scores (Earthman, 2002; Lanham, 1999; Lyons, 2001).

This study confirms previous research that highlights the importance of providing additional resources to school to help students from impoverished homes. If states do not provide these additional resources to schools with high percentages of low-wealth students, our nation’s schools will continue to be segregated by schools with students of privilege and schools with economically disadvantage students.

The percentage of low-income students did not seem to have much of an effect on teacher turnover and student attendance. In this study, teacher turnover and student attendance appear to be less affected by socioeconomic factors than student achievement. This should be encouraging to policy makers and school leaders, because they have little control over the socio-economic status of the children in their school. They do, however, have control over the resources necessary to provide quality school facilities that provide the environment for a quality education for every child in Texas.

Average Age of Facilities

The average age of facilities did not seem to affect average student attendance. However, the average age of facilities did affect average TAKS scores and teacher turnover to a small degree.

Portable Classrooms

This study indicated that the larger the percentage of portable square feet compared to permanent square feet in a school, the lower the average TAKS scores and the higher the teacher turnover rate.

A larger teacher turnover rate costs the school district time, energy, and money to recruit and train new teachers. If a school district does not have the money to build quality, permanent facilities for its students, how will it provide the increased money necessary to fund the additional recruiting and training of new teachers that comes from high teacher turnover?

A priority for school leaders should be to decrease the number of portable facilities in the school to positively affect teacher turnover.
Overcrowded Schools

This study found that overcrowded classrooms are a predictor of lower student attendance rates. Schools that have overcrowded classrooms are setting themselves up for discipline problems, frustrated teachers, and higher student absenteeism. Student attendance problems affect student achievement, because students who are not at school have less time in the classroom to be engaged in learning.

Policy makers and school leaders must make equitable school funding a priority so that schools are able to provide adequate classroom space for all children in Texas. All children deserve to have a quality education in a learning environment that is not crowded, noisy, or distracting.

Deferred Maintenance

Deferred maintenance refers to the amount of maintenance in a school that was needed but was deferred because of a lack of resources to perform the maintenance. This study found that the more deferred maintenance problems in a high school, the less success the students demonstrate through their average TAKS scores. Policy makers and educational leaders must provide the resources and leadership to adequately maintain school facilities so that all children can have access to a quality education.

Implications for Practice

The findings in this study show that socioeconomic backgrounds of students in small rural high schools have the most influence on the variability of educational outcomes. However, certain conditions of school facilities can have a measurable effect on the educational outcomes of student achievement, teacher turnover, and student attendance, particularly when combined with the socioeconomic characteristics of students. The fact that students come to school with differing socioeconomic backgrounds that are out of the control of educators magnifies the importance of policy makers and educational leaders to establish priorities and policies in the areas they do control that will improve educational opportunities for all children.

There are several implications for current best practices that come from this study. An effective teacher retention strategy is for schools to improve and upgrade their school facilities. Buckley et al. (2004) found that the impact of facility improvement on teacher retention is equal to or greater than the impact of pay increases for teachers. One benefit of the strategy of improving school facilities is that it is actually a more cost-effective teacher retention strategy than a permanent salary increase for teachers. Salary increases are on-going year after year. Facilities improvements are likely to be a one-time expense, last for many years, and have supplemental sources of state or federal funding available. School leaders and policy makers can have a better impact on teacher retention by spending limited resources on improving school facilities than even on increased salaries.

The quality of the school facilities in which a child receives his or her education should not depend on the wealth of the area in which he or she happens to reside. Excellent facilities for the few and adequate or barely adequate facilities for the many violates the proud heritage of Texas. Inequitable school funding has resulted in an economic segregation of students that closely resembles the racial segregation of the early 20th century.
Equal educational opportunity is fast becoming the new civil rights issue of the 21st century. Excellent facilities for children who need them the least and inadequate facilities for the ones who need them the most violates the principal of equal educational opportunity for all. Policy makers and educational leaders have a responsibility for providing a quality education system for all children. School leaders must demand equitable school funding for every school so every child can have access to equal educational opportunity.

John Dewey once said, “What the best and wisest parent wants for his own child, that must be what the community wants for all its children” (Biddle & Berliner, 2002, p. 58). Dewey’s ideal can be applied to equity in educational facilities by paraphrasing his words: What the most affluent community wants in the way of school facilities for its best and brightest students, that must be what the state of Texas wants for every child in the state.

Public education for all children is necessary for a free, democratic society. Equal educational opportunity must be provided for all children to level the playing field for everyone. America must have a public school system that provides an informed citizenry needed for democratic government, embraces the welfare of all children in the nation, upholds the ideal of equal educational opportunity, and levels the playing field for all children. Social justice and equal educational opportunity demand that the quality of school facilities should not be determined by race or social class.

In 1954, the United States Supreme Court ruled that separate but equal facilities were no longer sufficient, partly because the school facilities of black schools were actually not equal to the school facilities of white schools (Brown v. Board of Education, 1954). Today, when school facilities are found to be unequal, equal educational opportunity still does not exist. Texans must insist that policy makers not allow inadequate and unequal funding for school facilities that serve low-income and minority children. Otherwise, many children will still face the reality of separate but unequal school facilities.

Texas is moving toward a two-tiered school system: one for more affluent, mostly white students who enjoy the advantages of a quality educational system, and the other, for low-income, mostly non-white students whose educational environment virtually denies them the opportunity to learn at a comparable level.

It has always been immoral to shortchange schools that educate the greatest numbers of students growing up in poverty. As long as students continue to be disadvantaged by being educated in substandard facilities, advocates for children everywhere must continue to call for equity in our public educational system.

References


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