STUDENT OUTCOMES: EXAMINING SCHOOL EFFECTIVENESS IN KANSAS USING MULTIPLE INDICATORS OF PERFORMANCE

A Thesis by

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This study examined high school effectiveness through the use of multiple indicators of student performance, which was first studied by Rumberger and Palardy (2005). Data on Kansas high schools were taken from the Kansas State Department of Education’s public website. Analyses of variance were conducted to find differences in student achievement and dropout rates among schools based on size and location. Information on student characteristics was also included. Schools which were effective in terms of achievement were also found to be effective in terms of dropout rates. School effectiveness did vary according to school size and location, with small schools and rural schools being the most effective in terms of achievement and dropout rates. The results of this study supported the common view of the schooling process, which holds that all student outcomes are similarly influenced by school characteristics such as size and location.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Definitions of Student Performance Measures</td>
<td>2</td>
</tr>
<tr>
<td>II. LITERATURE REVIEW</td>
<td>6</td>
</tr>
<tr>
<td>School Effectiveness</td>
<td>6</td>
</tr>
<tr>
<td>Theoretical Perspective</td>
<td>6</td>
</tr>
<tr>
<td>School Effectiveness Research as Reported by Coleman et al. (1966)</td>
<td>7</td>
</tr>
<tr>
<td>Structural Characteristics</td>
<td>10</td>
</tr>
<tr>
<td>Student Characteristics</td>
<td>13</td>
</tr>
<tr>
<td>Gender</td>
<td>13</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>15</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>16</td>
</tr>
<tr>
<td>Multiple Indicators of School Performance</td>
<td>18</td>
</tr>
<tr>
<td>Summary</td>
<td>19</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>21</td>
</tr>
<tr>
<td>III. METHODS</td>
<td>22</td>
</tr>
<tr>
<td>Population</td>
<td>22</td>
</tr>
<tr>
<td>Variables</td>
<td>22</td>
</tr>
<tr>
<td>Structural Characteristics</td>
<td>22</td>
</tr>
<tr>
<td>Student Characteristics</td>
<td>22</td>
</tr>
<tr>
<td>Procedures</td>
<td>23</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>24</td>
</tr>
<tr>
<td>IV. RESULTS</td>
<td>25</td>
</tr>
<tr>
<td>Analyses of Variance</td>
<td>26</td>
</tr>
<tr>
<td>Zero-Order Correlational Analysis</td>
<td>27</td>
</tr>
<tr>
<td>V. DISCUSSION</td>
<td>30</td>
</tr>
<tr>
<td>Student Characteristics</td>
<td>31</td>
</tr>
<tr>
<td>Multiple Indicators of Performance</td>
<td>32</td>
</tr>
<tr>
<td>Limitations</td>
<td>33</td>
</tr>
<tr>
<td>Suggestions for Future Research</td>
<td>34</td>
</tr>
<tr>
<td>Conclusions</td>
<td>36</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>37</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Structural Characteristics of School</td>
<td>23</td>
</tr>
<tr>
<td>2. Means, Standard Deviations, and Ns for Achievement Variables and Dropout Rate</td>
<td>25</td>
</tr>
<tr>
<td>3. Sample Sizes, Means, and Standard Deviations for Percent Dropout Rate and Percent Meeting or Exceeding State Standards in Math and Reading by School Size</td>
<td>27</td>
</tr>
<tr>
<td>4. Sample Sizes, Means, and Standard Deviations for Percent Dropout Rate and Percent Meeting or Exceeding State Standards in Math and Reading by School Location</td>
<td>27</td>
</tr>
<tr>
<td>5. One-Way Analysis of Variance for Math Achievement and Reading Achievement by School Size and Location</td>
<td>27</td>
</tr>
<tr>
<td>6. Analysis of Variance for Math Achievement and Reading Achievement by School Size</td>
<td>28</td>
</tr>
<tr>
<td>7. Zero-Order Correlational Analysis</td>
<td>29</td>
</tr>
</tbody>
</table>
There is a vast amount of research available enumerating the detrimental effects of dropping out of high school. Individuals without a high school diploma are more likely to abuse drugs, utilize social services, and go to prison than individuals who graduate from high school (Gfroerer, Greenblatt, & Wright, 1997; LeCompte & Dworkin, 1991). There are also increasing economic consequences of dropping out of high school. For example, in 1997 among individuals 16 to 24 years of age, only 67% of high school dropouts were participating in the labor force compared with 83% of high school graduates; for those individuals in the labor force, the unemployment rate for high school dropouts was 10.4% compared to 5.1% for high school graduates (U.S. Bureau of Labor Statistics, 1998).

Considering the well known negative consequences that await students who drop out of high school, increasing graduation rates should be a top priority for educators and policymakers. One way to do this is to identify which schools are most effective and look for ways to improve the performance of low-achieving schools. The recent No Child Left Behind Act of 2001 assesses effectiveness through “adequate yearly progress” on state assessment measurements (U.S. Department of Education, 2003b). However, this narrow definition of school effectiveness omits several other important indicators of school performance. The use of multiple indicators may be more appropriate as there is evidence to suggest that schools which perform well on one indicator may not be effective when evaluated using another indicator of performance (Rumberger & Palardy, 2005). In this study the researcher was interested in the following measures of student performance which are related to school effectiveness: student achievement, student dropout rates and student transfer rates.
Definitions of Student Performance Measures

Finn (1989) offers two models for understanding dropping out as a developmental process. First, the frustration-self-esteem model begins with poor school performance, which is often attributed to the school’s failure to provide adequate instruction or support for the student’s needs. The student’s continued failure leads to embarrassment or frustration, which in turn impairs the student’s self-view. The student then acts out at the agency seen as responsible, in this case the school, through oppositional acts such as disrupting instruction and skipping class. The end result is the student’s total withdrawal from school or their involuntary removal.

Second, the participation-identification model begins with students in the earliest grade levels as willing participants in the schooling process due to encouragement from home and the classroom environment. In order for the students’ active participation to continue, they must encounter some degree of success in the schooling process. Through this success, students will begin to form a sense of belongingness with the school and internalize school-relevant goals.

Although a reasonable amount of frustration is inevitable for all students, the self-reinforcing nature of the cycle should keep students involved and participating throughout their school career. However, some students may arrive at school unprepared to learn or predisposed to nonparticipation due to a lack of encouragement at home. Without their initial participation, it is difficult for these students to experience any level of success and form a sense of attachment to the school. Whereas exceptional teachers may be able to encourage some students to participate in the schooling process, the likelihood of a student identifying with school decreases the longer the pattern of nonparticipation continues.

Although the two models focus on different factors, both view dropping out as a developmental process for which poor school performance is an important antecedent. Research
has shown that characteristics of schools, such as size and location can affect student performance (Lee & Smith, 1995, 1997; Lee, Smith & Croninger, 1997; Rumberger & Palardy, 2005; Witte & Walsh, 1990). It is important to note that, if school structure can affect student performance, it can also theoretically affect student dropout rates. Research on dropout rates supports the theory of a relationship between academic performance and the likelihood of a student dropping out. In a study of 6,330 ninth graders in a large urban school district in the southwestern United States, Zvoch (2006) found that students with higher achievement scores had lower odds of dropping out. His findings were largely consistent with previous research findings that have shown academic achievement to be a strong predictor of dropout status (Lee & Burkam, 2003; Riehl, 1999; Rumberger & Larson, 1998).

Student transfer is another factor which can affect a student’s likelihood of dropping out. According to a study by Rumberger and Larson (1998) “students who changed high schools between the eighth and twelfth grades were more likely to have dropped out or enrolled in an alternative educational program by twelfth grade than students who did not change schools” (p. 21). This is an important finding considering the large number of high schools students in this study who were mobile between 1988 and 1992; during the four-year period between eighth and twelfth grades, more than one-quarter of the students changed schools. These results were similar to a later study by Rumberger & Thomas (2000) which reported a mean transfer rate of 20.4% in 1990 for a large sample of urban and suburban high schools. They found the most powerful predictor of transfer was the ethnic composition of the school; specifically, “schools in which more than 40 percent of the students were black or Hispanic had turnover rates that were more than 50 percent higher than comparable schools with lower concentrations of these minority students” (p. 55).
A more disturbing finding in dropout research is the notion that some schools may discharge low-achieving students as either dropouts or transfers. Bowditch (1993) found that the school disciplinary personnel in a large inner-city high school, to which she gave the pseudonym Dubois High School, adopted explicit practices to identify troublemakers and punish them accordingly. She stated, “Students who failed classes, played hookey, used drugs, or frequently troubled teachers with disruptive behavior were students who, in the minds of most school workers, did not belong in school” (p. 500). Once a student had been identified as a troublemaker, the school then employed one of two methods for getting rid of the student. The first option was to transfer the student, either by shifting their residence to that of a relative in another district or by going through the legal proceedings involved in a disciplinary transfer. The second option was to simply drop the student from the roll. According to Bowditch (1993), “Although the state granted all students the right to attend public school until the age of twenty-one, it did not require attendance past the age of sixteen” (p. 504). In DuBois High School, the disciplinarians interpreted this to mean that they were not required to keep students past the age of sixteen, especially those who were overage for their grade. Such students were often discouraged from continuing school and pressed into dropping out or transferring by the staff. Of DuBois High School’s 335 dropouts in the 1985/86 school year, all but six were classified as overage.

A more recent study by Riehl (1999) supports these earlier findings of a link between school discharge procedures and low-achieving students; specifically, “increases in attendance and courses passed are associated with a decreased probability of discharge…whereas an increase in age and the condition of being two or more years overage for grade are associated with an increased probability of discharge” (p. 255). What these studies point to is the idea of
schools playing an active role in the dropout process, rather than being a passive observer. If schools can and do affect several student outcomes they should be held accountable for all of these outcomes and, in effect, for all students.

The purpose of this study was to examine high school effectiveness through the use of multiple indicators of performance. Student outcomes measured included: academic achievement as measured by state assessment scores and dropout rates as evidenced by the number of students who left school during the school year. The following chapter presents an overview of research related to the topic of school effectiveness. Chapter three summarizes the methods used in the study, including the sample, data collection and analysis. Chapter four reports the analysis of the data and chapter five discusses the results of the study.
CHAPTER 2
LITERATURE REVIEW

School Effectiveness

Theoretical Perspective

The majority of research on school effectiveness is based on the common view of the schooling process. This view holds that all aspects of student outcomes - academic achievement, transfer rates, and dropout rates - are similarly influenced by such school characteristics as school size and location (Rumberger & Palardy, 2005). For instance, if mid-sized high schools do indeed have lower dropout rates than larger high schools as some studies suggest (Lee & Burkam, 2003; Lee & Smith, 1997; Rumberger & Palardy, 2005), the common view of the schooling process would assume that these schools would also have lower transfer rates and higher academic achievement. It is under the belief of the common view that many studies of school effectiveness have looked at only a single indicator of school performance and believed it to be representative of the schools’ overall performance. Academic achievement is the most widely used indicator of school effectiveness in many studies (Lee & Smith 1995, 1997; Lee, Smith & Croninger, 1997; Witte & Walsh, 1990), while other research has looked at alternative indicators of school performance such as transfer rates (Rumberger & Larson, 1998; Rumberger & Thomas, 2000) and dropout rates (Goldschmidt & Wang, 1999; Lee & Burkam, 2003; McNeal, 1997; Zvoch, 2006).

Research on school effectiveness seeks to understand why some schools are more effective than others in terms of student outcomes. School effectiveness is gauged by No Child Left Behind through annual student testing that measures schools’ and districts’ “adequate yearly progress” (AYP) towards meeting state-defined standards; all states will eventually be required
to report graduation rates as well (U. S. Department of Education, 2003a). The state of Kansas reports on several measures of school effectiveness, including graduation and attendance rates, although the federal government currently only holds schools accountable for their assessment results and their progress towards making AYP (Kansas State Department of Education, 2007a). This study used three variables, student achievement, student transfer rates and student dropout rates, to define effective schools. Chapter two begins by discussing the landmark Coleman Report (1966) in terms of these three variables and the issues of race and gender. Next, research related to structural characteristics of schools and background characteristics of students and their relation to student achievement, student transfer rates, and student dropout rates is discussed. Finally, a study which utilized multiple indicators of student performance to measure school effectiveness is examined.

**School Effectiveness Research as Reported by Coleman et al. (1966)**

Commissioned in Section 402 of the Civil Rights Act of 1964, the landmark Coleman study sought to answer four specific questions about the American educational system. As segregation had been ruled unconstitutional by the Supreme Court in 1964, the first objective of the study was to determine to what extent racial and ethnic groups were still segregated in the public school system. The answer was disturbing but not surprising; segregation was the norm in public schools where nearly 80% of all Caucasian children in first and twelfth grade attended schools that ranged from 90% to 100% Caucasian. Sixty-five percent of African American children in first grade attended a school that was 90% to 100% African American, making them the most segregated minority. The study found that African American segregation was most pronounced in the South but was also extensive in the urban North, Midwest, and West. This pattern of segregation was also present for teachers in the public education system. The average
Caucasian elementary student attended a school where 97% of the teachers were Caucasian, while the average African American elementary student attended a school where 65% of the teachers were African American.

The second question the Coleman Study sought to answer was whether or not public schools were equal in terms of educational quality. According to Coleman et al. (1966),

The first finding is that the schools are remarkably similar in the way they relate to the achievement of their pupils when socioeconomic background of the students is taken into account. It is known that socioeconomic factors bear a strong relation to academic achievement. When these factors are statistically controlled, however, it appears that differences between schools account for only a small fraction of differences in pupil achievement. (p. 21)

The study compared schools according to three different types of criteria, including the characteristics of the student body, the characteristics of the teachers and the characteristics of the schools themselves; for example, textbooks and curriculum offerings. Coleman et al., (1966) found that the racial composition of the student body had the greatest effect on student achievement. Specifically, the proportion of Caucasian students in a school was positively related to the academic achievement of all racial groups within the school. In their analysis, the characteristics of the student body were found to account for the most variance in pupil achievement between schools. Numerous studies have since replicated these results, which indicate that characteristics of the student body can predict outcomes such as achievement and dropping out even when the background characteristics of individual students are accounted for (Goldschmidt & Wang, 1999; Lee & Burkam, 2003; McNeal, 1997; Rumberger & Palardy, 2005; Rumberger & Thomas, 2000). Teacher characteristics were found to have a moderate
impact upon student achievement which tended to increase with grade level. The teacher variables which had the strongest positive effect upon student achievement were: the teacher’s family education level; the teacher’s own education; and the teacher’s score on a vocabulary test. The factors which were found to have the least impact upon student achievement were the characteristics of the schools themselves, although the impact of these factors was shown to increase between sixth and twelfth grade. In reference to school size, the study generally found that “the smallest and most rural schools have lower achievement than larger and more urban schools, but the largest and most urban do not have higher achievement than those of middle size” (p. 314). It’s important to note that all three factors which were examined, student body characteristics, teacher characteristics and school characteristics, were found to have a greater impact upon minority students than Caucasian students. This suggests that students who were most likely to be educationally at risk were also more responsive to the school environment.

Next, the study sought to discern how much students learn as measured by scores on standardized achievement tests. Not surprisingly, the results indicated that how much a student learns is related to their race. With little variation, Caucasian students scored the highest on achievement tests, followed by Asian-Americans, Indians, Mexican-Americans, Puerto Ricans and African Americans. In terms of achievement growth, Coleman et al. (1966) found that “most students do not change their relative positions over the period of school” (p. 220). On average, Caucasians begin school scoring one standard deviation above African Americans and this trend continues and, in some regions increases, through grade 12. However, the region a student lived in also affected their achievement; both Caucasian and African American students living in the North or West showed higher achievement scores than those living in the South or Southwest.
Achievement was also higher for both races living in metropolitan areas than for those living outside metropolitan areas.

The final question the study examined was whether or not a relationship existed between student achievement and types of schools attended. To do this, variations in achievement scores were examined within the same schools and between different schools. The largest variance was found within the same student body and only 10 to 20% of the variance in achievement could be attributed to the differences between schools. Since these differences within the student body were found as early as the first grade, it appears that variations in achievement were more a consequence of variations in students’ backgrounds than differences in schools. Therefore, it appears that schools are quite uniform in their effect on pupil achievement. However, larger school to school variation was found for African Americans indicating that type of school attended had a larger impact on the achievement of this minority group.

Although the Coleman study is more than 40 years old, there has not been a study of school effectiveness that can compare to its size or significance in recent years. However, the results of the Coleman study have inspired a large amount of research in this field. Next we will look at more recent research which relates to school effectiveness and the variables of student achievement, student dropout, and student transfer.

*Structural Characteristics*

The structural characteristics of a school are related to school effectiveness. For example, school location (urban, suburban, rural) is a variable for which a few studies have anticipated differential effects but that has yielded inconsistent results (Gamoran, 1992). In their study of the effective schools model Witte and Walsh (1990) found that suburban schools performed better academically at every grade level when compared to urban schools; however, their results were
confounded by the high degree of class and racial segregation that existed between the urban and suburban school districts. In regard to dropout rates, Rumberger and Larson’s study (1998) reported “students who attended an urban school were 50 percent more likely to drop out of school than students who attended suburban or rural schools” (p. 23). These results were contradicted by a later study, which found that urban high schools had lower adjusted dropout rates than suburban high schools (Rumberger & Thomas, 2000). Although these findings are important, they do not tell us whether school location is truly responsible for differences in school performance indicators or if the differences are actually related to other structural features of schools which vary according to location such as school resources and student characteristics.

A recent study by Thirunarayanan (2004) sought to discover whether or not the discrepancy between rural, urban, and suburban students on national assessments in grades 4, 8, and 12 was statistically significant. Students in urban schools consistently scored significantly below their suburban counterparts in geography, civics, math, science, and U.S. history. In reading, suburban students scored significantly above urban students in grades 4 and 8 for all four assessment periods and in grade 12 for one assessment period. Urban students’ scores in reading were also significantly below the scores of their rural peers in grades 4 and 8 all four years. While this study did not control for differences in schools and student bodies, it does provide evidence of a relationship between student achievement and school location. Generally, students in suburban schools perform significantly better on national assessments than their urban and rural peers.

School size is another structural characteristic of schools which has received a fair amount of research interest. In a review of the relevant research on school effectiveness, Lee, Bryck and Smith (1993) illuminate the two theoretical perspectives which characterize most research on school size. The first emphasizes cost efficiency through increasing the number of
students in a school and thereby reducing the core costs per pupil by spreading them over a
larger pupil base. Referred to as economics of scale, the idea is to then use these savings to
increase the schools’ academic offerings and, presumably, student achievement. In a major
review by Chambers (as cited in Lee, Bryk, and Smith 1993) little evidence was found to support
the economics of scale perspective. Although savings may accrue from larger schools, they are
often used to counteract the problems associated with such learning environments (e.g. drug
abuse, vandalism). When additional resources do materialize, they are often used to increase
academic stratification within the school, which may inadvertently decrease educational equity
among the student body. Several studies have found that learning is more equitably distributed in
smaller schools with a constrained academic curriculum where students share a similar academic
directive (Lee & Bryk, 1989; Lee & Smith, 1995; Lee & Smith, 1997). The second research
perspective focuses on the more formalized social interactions which may result from increased
school size. Lee, Bryk, & Smith (1993) describe the negative consequences which are associated
with increased school size: First, as individuals become more specialized and their roles more
static, loyalty may be focused away from the unit as a whole and shifted toward a certain
department. Second, a more formalized communication system is required, which increases the
distance between any one person and a source of information. Third, large organizations are
more likely to hold formalized cultural beliefs which may negatively influence group cohesion.
As individuals’ tacit beliefs are unengaged, disagreements on goal consensus may lead to
opposition within the group. In general, Lee, Bryck & Smith (1993) found:

Large high schools are characterized by socially stratified learning opportunities and the
resulting academic outcomes, as well as by some increase in the alienation and
detachment of students and teachers from the school and its aims….Schools should
neither be too large to inhibit a strong sense of community nor too small to offer a full curriculum and adequate instructional facilities. (p. 189).

A study by Lee and Smith (1997) sought to answer the question of what size high school is ideal in terms of achievement gains and social distribution of learning. Their findings indicated that a moderately sized high school, which enrolls 600 to 900 students, is large enough to offer a variety of courses but small enough to promote positive social relationships. Achievement gains were largest in schools of this size, regardless of the school’s minority concentration or average student SES. However, learning was distributed more equitably in smaller schools; for reading the most equitable schools enrolled 300-600 students, while schools of 300 or less had the greatest equity advantage in mathematics learning. Overall, their findings indicated that school size does affect learning gains and how those learning gains are distributed within the student body. Their research was largely consistent with other recent studies which found higher achievement gains and a more equitable distribution of learning in medium sized high schools (Lee, Bryk, & Smith, 1993; Lee & Smith, 1995; Lee, Smith & Croninger, 1997).

Student Characteristics

The effect of individual student characteristics on student outcomes has been well researched (Goldschmidt & Wang, 1999; Lee & Burkam, 2003; McNeal, 1997; Rumberger & Thomas, 2000). These characteristics - which have been shown to influence a number of student outcomes such as dropout rates, transfer rates, and achievement scores - include: demographic qualities, like gender and ethnicity; and family characteristics, including socioeconomic status (SES).

Gender. Several studies examining gender and its relationship to dropping out have found that males and females generally have similar dropout rates once other factors such as SES are
taken into account (Lee & Burkam, 2003; McNeal, 1997; Zvoch, 2006). Other research in gender differences has examined academic achievement and intellectual ability. Such research usually attributes differences between the sexes to either biological traits or sociological factors. The question of whether or not intellectual differences actually exist between men and women is a question of great importance to those within the field of education. Unfortunately, research results have been largely inconsistent. According to Klein (2004), “Accumulated findings indicate mixed and ambiguous trends. In almost every discipline, both the presence and absence of gender differences have been reported” (p. 184). Some researchers believe that these inconsistencies are due to factors which were not identified in the studies, such as the effect of teacher gender upon male and female achievement (Borg & Falzon, 1993; Tatro, 1995). Klein (2004) sought to examine the relationship between gender and achievement by controlling for a wide range of variables including teacher gender. Findings indicated that girls are given higher grades by both male and female teachers and that female teachers generally give higher grades to all students than male teachers do. Overall, teacher gender accounted for a statistically significant amount of variance in students’ grades but pupil gender was only significant when the teacher was a man. The results of this study support sociological theory which views gender differences in achievement as resulting from cultural stereotypes and situational factors rather than biological differences.

The results of a recent meta-analysis (Hyde & McKinley, 1997) which investigated gender differences in cognitive ability also lends support to sociological theory. Generally, the study found that the gender differences in cognitive ability found in research studies decreased between 1960 and 1990. Specifically, in the areas of general verbal ability and mathematical ability, gender differences were virtually nonexistent. In terms of spatial ability, males displayed
better spatial perception and better mental rotation ability than females but the genders were found to have similar spatial visualization ability. The last area of cognitive ability examined was variability of performance. Males displayed more variability of performance on some tests of general knowledge, spatial ability, spelling and quantitative ability than females did.

*Ethnicity.* Several studies have found evidence to indicate that race is related to dropping out of high school, with African American and Hispanic students being more likely to drop out than their Caucasian peers (Lee & Burkam, 2003; Rumberger & Larson, 1998; Rumberger & Thomas, 2000). Differing patterns of achievement by race are also found in National Assessment of Education Progress scores where Caucasian fourth and eighth grade students scored significantly higher than African American or Hispanic students in reading and mathematics (U.S. Department of Education, 2003b).

According to Bali and Alvarez (2004), this disturbing trend of low minority achievement is commonly known as the *race gap* and is found in standardized test scores across the nation. In their longitudinal study, which contained a much larger sample of minority students than many previous studies, they sought to answer three questions. The first question asked whether or not achievement gaps develop in a racially diverse school environment. The results of the study strongly indicated that Hispanic and African American students did score significantly below Caucasian students in both reading and math beginning in the early grades. The second question examined when and how these gaps develop. The study found that the achievement gaps developed differently for African Americans and Hispanics. African Americans experienced a larger widening gap in reading than Hispanics did as well as an earlier onset of achievement gaps, particularly in math. The gap between Hispanic students and Caucasian students was
generally smaller than the gap between African American students and Caucasian students. The third question concerned how the results from this study compared to those of other studies.

Generally, the achievement gaps estimated by Bali and Alvarez fell within the lower ends of the estimated gaps found in the literature. After controlling for several other factors which may have influenced the results of this study, the researchers concluded that the widening gap between minorities and Caucasian students did not seem to be the by-product of minorities attending schools of lesser quality or the result of bias in standardized testing. The results of Bali and Alvarez’s study were similar to other research studies in the field which have found significant gaps between the test scores of Caucasian and minority students even after controlling for individual student characteristics and the school attended (e.g. Stiefel, Schwartz, & Ellen, 2006).

Socioeconomic Status. A meta-analytic review conducted by Sirin (2005), sought to measure the magnitude of the relationship between SES and academic achievement as well as compare this correlation with White’s previous meta-analysis on the same variables (as cited in Sirin, 2005). The review was also designed to examine how methodological characteristics and student characteristics moderate the statistical relationship between SES and academic achievement. Overall, the study found a moderate effect size (ES) between SES and academic achievement at the student level and a large ES between SES and academic achievement at the school level. However, the strength of the relationship was found to be contingent upon several methodological and student characteristics. For instance, data provided by students about their family’s SES were found to have a much weaker relationship between SES and academic achievement than data collected from parents. The race of students played a role as well; the
correlation between SES and academic achievement was stronger for Caucasian students than it was for minority students.

School location also proved to be a moderating factor in the relationship between student SES and academic achievement with rural schools having the smallest effect size (ES) and suburban schools having the largest. Sirin (2005) cautions that, although a moderate relationship was found between SES and academic achievement, “the impact of family SES varies for individuals depending on where they live and the cohort with whom they go to school” (p. 442). In general, the findings of this meta-analysis were consistent with the previous meta-analysis conducted by White (as cited in Sirin, 2005) although the magnitude of the relationship between SES and academic achievement was not as strong. Sirin (2005) notes that this decline may be due to changes in research methods or changes in educational trends.

There is evidence to indicate that the impact of student characteristics on dropping out is constant across schools; that is, individual student characteristics operate upon students regardless of school context (McNeal, 1997). A study by Lee and Burkam (2003) found that “dropping out of high school between 1990 and 1992 was related strongly to students’ social and academic backgrounds” (p. 375). Some studies have indicated that being held back and being overage for grade level are strong predictors of a student dropping out (Goldschmidt & Wang, 1999; Zvoch, 2006), while other studies point to indicators such as risk status and academic background (Croninger & Lee, 2001). Generally, the research on student characteristics indicates that students who are low-achieving and from lower-class and unstable families are more likely to dropout (Rumberger & Larson, 1998; Rumberger & Thomas, 2000).

One student outcome, which is related to both individual student characteristics and the likelihood of a student dropping out, is the incidence of student transfer. Rumberger and Larson
(1998) found that high school students have high rates of transfer and that these rates were related to social class. Similar to findings on dropout rates, they found that lower social-class students had increased rates of transfer when compared to higher social-class students. Specifically, in a four-year period they discovered that “almost two-thirds of the highest SES students were stable over this period in that they did not change residence or change schools, whereas only 43 percent of the lowest SES students were stable” (p. 20). The study also confirmed that transfer rates were related to race, previous grade retention and family structure.

In addition to affecting dropout behavior and transfer rates, student characteristics also influence how much students learn. Several studies have found positive correlations between student SES and academic performance, indicating that students from higher SES families learn more (Lee & Smith, 1997; Rumberger & Palardy, 2005; Witte & Walsh, 1990). Similarly, Rumberger & Palardy (2005) found that “schools have relatively small effects on student learning in comparison with student background characteristics, which supports one of the original conclusions of the landmark Coleman report (Coleman et al., 1966)” (p. 24).

Multiple Indicators of School Performance

As previously mentioned, the majority of research on school effectiveness is based on the common view of the schooling process. The common view proposes that all aspects of student outcomes are similarly influenced (i.e., schools with lower dropout rates should also have lower transfer rates and higher achievement scores). An alternate view of the schooling process holds that different student outcomes are affected by different school characteristics and is known as the differentiated view. According to this perspective, the characteristics that influence student learning may not influence a student’s decision to leave school through dropout or transfer. Rumberger and Palardy (2005) conducted the first study to use multiple indicators of school
performance when they researched school effectiveness in terms of academic achievement, transfer rates and dropout rates. The results of their study lend support to the differentiated view of the schooling process. Specifically, they reported that large schools (1,200 to 1,800 students) have both higher dropout rates and higher achievement rates among remaining students than small to mid-sized schools, a finding which may support previous reports of schools actively discharging low-achieving students (Bowditch, 1993; Riehl, 1999). They also found that small schools were no more effective than mid-sized schools in regards to student achievement, student dropout or student transfer. In regards to student transfer, they reported that very few schools were effective in reducing transfer rates. These results are consistent with dropout theories which suggest student departure is related to problems in several aspects of school, including academic engagement and social problems, which may require different strategies and resources for intervention (Finn, 1989).

Summary

In general, there is research to support the view that school effectiveness is related to school location with suburban students performing significantly better on national assessments than students in rural or urban schools (Thirunarayanan, 2004). There is also research which has yielded contradictory results, finding that urban schools had lower adjusted dropout rates than suburban schools (Rumberger & Thomas, 2000). Clearly, more research is needed to determine whether or not school location is related to school performance indicators. School size is another school characteristic which has been shown to affect student performance. A study by Lee and Smith (1997) found that a high school of 600 to 900 students was more effective than larger high schools in terms of achievement gains and equitable distribution of learning. It is unclear whether or not these results can be generalized to other areas and populations.
Student background characteristics, including gender, race, and SES, have also been shown to have strong effects on student performance indicators. Generally these factors account for the majority of variance in student achievement, student dropout rates, and student transfer rates, whereas differences in schools account for a relatively small amount of variance in these variables (Coleman et al., 1966; Rumberger & Palardy, 2005). However, student background characteristics are unchangeable whereas school characteristics can be manipulated. There is also evidence to indicate that school location can moderate the impact of SES on student achievement (Sirin, 2005). For that reason, this study also focused on the effect of school characteristics on student outcomes.

Many previous studies have investigated school effectiveness using one indicator of student performance, such as achievement (Lee & Smith 1995, 1997; Lee, Smith & Croninger, 1997; Witte & Walsh, 1990). Only one study has been conducted using multiple indicators of student performance to evaluate school effectiveness. This pioneering study by Rumberger & Palardy (2005) found evidence to indicate that schools which are effective in terms of student achievement are not necessarily effective in terms of student dropout rates and student transfer rates. More studies are needed to either support or refute their findings. This study had hoped to investigate school effectiveness using three student performance variables: achievement, dropout rates, and transfer rates. However, data on school transfer rates was not available for analysis.

This research study addressed three basic questions: (a) Are schools that are effective in terms of student achievement also effective in terms of student dropout rates? (b) Does school effectiveness vary according to the structural characteristics of school size and location? and (c) Do the results of this study support the differentiated or the common view of the schooling process?
Hypotheses

The research hypotheses for this study were:

1. Large schools (greater than 1200 students) have higher rates of student dropout than small-sized or medium-sized schools.

2. Schools located in urban school districts have higher rates of student dropout than schools located in suburban or rural school districts.

3. Schools of medium size (between 600 and 1200 students) have higher rates of student achievement in math and reading than small-sized or large-sized schools.
CHAPTER 3
METHODS

The purpose of this study was to compare schools of different size and location to
determine which schools are most effective. Student achievement and student dropout rates were
the variables used to measure school effectiveness.

Population

This study used school level data from the population of all Kansas public high schools.
According to the Kansas State Department of Education (KSDE, 2007b) there were 463,840
students enrolled in Kansas public schools during the 2005-2006 school year. The student
population was classified as 73.7% Caucasian, 8.3% African American, 11.6% Hispanic, and
6.4% Other. Males constituted 51.7% of the sample and females 48.3%. Students with
disabilities made up 13.9% of the population and 38.6% of the population was classified as
economically disadvantaged. Students who were English language learners made up 5.8% of the
Kansas student population.

Variables

Student achievement was measured by Kansas state math assessment scores for 10th
grade students and reading assessment scores for 11th grade students. Data were reported as the
percentage of students whose scores met standards, exceeded standards or were exemplary.

Dropout rates used were those reported on the KSDE website for grades 7 through 12. According
to the KSDE (2007b) “dropout rates are calculated using dropouts reported for the year for
Grades 7 through 12 and dividing the total enrollment for the year for the same grades” (p.13).

Structural characteristics. Data were reported according to structural characteristics of
size and location. Buildings which enrolled less than 600 students were classified as small
schools, buildings which enrolled between 600 and 1200 students were classified as medium schools and buildings which enrolled more than 1200 students were classified as large schools (see Table 1). There are 300 school districts in the state of Kansas (KSDE, 2007b). School district location was determined using one of three classifications based upon population. School districts located within cities that have a population greater than 35,000 were considered urban school districts; there were 25 such school districts in Kansas. Suburban school districts were defined as those located within a large town having a population greater than 3,500 but less than 35,000; 57 school districts in Kansas met these criteria. Rural school districts were those located within a small town with a population less than 3,500; there were 218 school districts in Kansas which met these criteria (see Table 1). Due to the fact that Kansas is a state of primarily small and rural schools, not all small and rural schools were included in the analysis. All schools which were classified as medium, large, suburban and urban were included in the analysis.

Table 1. Frequency of Size and Location of 246 Kansas Public High Schools

<table>
<thead>
<tr>
<th>Size (N = 246)</th>
<th>Location (N = 246)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (0-600)</td>
<td>174</td>
</tr>
<tr>
<td>Medium (600-1200)</td>
<td>37</td>
</tr>
<tr>
<td>Large (1200+)</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Urban (35,000+)</td>
</tr>
</tbody>
</table>

**Student characteristics.** Data were recorded according to student characteristics of gender, percent of low SES, and ethnicity. Not all high schools disaggregated data according to these student characteristics, but the data were recorded when they were available. Percent of
low SES students was identified as the percentage of students receiving free and reduced lunches. Schools did not consistently report their minority achievement data; therefore, it was difficult to disaggregate by different minority groups. Also, the achievement scores for the different minority groups were usually similar. Therefore, the most feasible way to utilize minority data was to combine minority groups and report them as one variable.

Procedures

All data were collected from the Kansas State Department of Education (KSDE). The data on student assessments were taken from the KSDE’s public website. From the Building Report Card, the researcher accessed each district and then went to each individual high school for relevant data. Schools reported their data generally by math achievement, reading achievement, low SES and by minority status and dropout rates. Data for the 2005-2006 school year were used.

Data Analysis

To test hypothesis 1, a one-way analysis of variance (ANOVA) was calculated to determine if there were significant differences in dropout rates based on school size (small, medium, large). For hypothesis 2, a second one-way ANOVA was calculated to determine if there were significant differences in dropout rates based on school location (urban, suburban, rural). For hypothesis 3, a one-way ANOVA was calculated to determine whether there were significant differences in student math and reading achievement based on school size (small, medium, large). When significant differences were identified by analysis of variance procedures, appropriate post hoc comparisons were made using Tukey’s multiple comparisons test.
CHAPTER 4

RESULTS

Data were analyzed using ANOVAs, as discussed in chapter three. The following research hypotheses were tested: (a) Large sized schools (greater than 1200 students) have higher student dropout rates than small or medium-sized schools, (b) Schools located in urban school districts have higher student dropout rates than schools located in suburban or rural school districts, (c) Medium school sized schools (between 600 and 1200 students) have higher rates of student achievement than small or large-sized schools. Table 2 displays the descriptive statistics for the sample.

Table 2

Mean Percents, Standard Deviations, and Ns for Achievement Variables and Dropout Rate

<table>
<thead>
<tr>
<th></th>
<th>Mean %</th>
<th>Standard Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout Rate</td>
<td>2.31</td>
<td>2.42</td>
<td>246</td>
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<tr>
<td>Reading Achievement</td>
<td>78.39</td>
<td>12.19</td>
<td>247</td>
</tr>
<tr>
<td>Reading Achievement- Males</td>
<td>75.86</td>
<td>14.84</td>
<td>224</td>
</tr>
<tr>
<td>Reading Achievement- Females</td>
<td>80.44</td>
<td>12.90</td>
<td>230</td>
</tr>
<tr>
<td>Reading Achievement-Low SES</td>
<td>66.98</td>
<td>13.32</td>
<td>193</td>
</tr>
<tr>
<td>Reading Achievement-Minorities</td>
<td>62.01</td>
<td>15.19</td>
<td>72</td>
</tr>
<tr>
<td>Math Achievement</td>
<td>60.49</td>
<td>16.17</td>
<td>245</td>
</tr>
<tr>
<td>Math Achievement-Males</td>
<td>60.15</td>
<td>16.32</td>
<td>223</td>
</tr>
<tr>
<td>Math Achievement-Females</td>
<td>59.31</td>
<td>17.20</td>
<td>220</td>
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<tr>
<td>Math Achievement-Low SES</td>
<td>46.42</td>
<td>15.91</td>
<td>201</td>
</tr>
<tr>
<td>Math Achievement-Minorities</td>
<td>41.77</td>
<td>18.60</td>
<td>70</td>
</tr>
</tbody>
</table>

Note. Achievement is defined as the percentage of students whose scores met standards, exceeded standards or were exemplary on state assessments.
Analyses of Variance

The first hypothesis stated that large schools have higher rates of student dropout than small or medium-sized schools. A significant difference was found, $F(2, 243) = 6.05, p < .05$, indicating significant differences exist in student dropout rates based on school size. However, Levene’s Test of Homogeneity of Variances was also significant at the $p = .04$ level. This test is likely significant because the unequal sample sizes of small, medium and large schools increases the risk for a Type 1 error. However, since virtually all Kansas public high schools were included in the analysis, the analysis of variance and multiple comparisons were completed. Tukey Post Hoc multiple comparisons indicated that small schools have significantly smaller percentages of dropouts than either medium or large schools. A second one-way ANOVA was calculated to address the hypothesis of whether or not there were significant differences in student dropout rates based on school location. A significant difference was found $F(2, 243) = 7.86, p < .05$. Levene’s Test of Homogeneity of Variances was again significant at the $p = .00$ level. This again indicates that unequal sample sizes of rural, suburban and urban schools may have increased the risk for a Type 1 error. Tukey Post Hoc multiple comparisons found that rural schools had significantly lower dropout rates than either suburban or urban schools. Table 3 displays means and standard deviations for school size, Table 4 displays means and standard deviations for school location, and Table 5 displays results of the analyses of variance for the first two hypotheses.
Table 3

Sample Sizes, Means, and Standard Deviations for Percent Dropout Rate and Percent Meeting or Exceeding State Standards in Math and Reading by School Size

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout Rate</td>
<td>174</td>
<td>1.97</td>
<td>2.06</td>
<td>37</td>
<td>3.11</td>
<td>2.39</td>
<td>35</td>
<td>3.14</td>
<td>3.57</td>
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<tr>
<td>Math Achievement</td>
<td>173</td>
<td>62.03</td>
<td>15.35</td>
<td>37</td>
<td>54.35</td>
<td>17.52</td>
<td>35</td>
<td>59.34</td>
<td>17.46</td>
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<tr>
<td>Reading Achievement</td>
<td>175</td>
<td>79.49</td>
<td>11.55</td>
<td>37</td>
<td>75.41</td>
<td>13.36</td>
<td>35</td>
<td>76.06</td>
<td>13.48</td>
</tr>
</tbody>
</table>

Table 4

Sample Sizes, Means, and Standard Deviations for Percent Dropout Rate and Percent Meeting or Exceeding State Standards in Math and Reading by School Location

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropout Rate</td>
<td>148</td>
<td>1.87</td>
<td>1.91</td>
<td>60</td>
<td>2.65</td>
<td>2.25</td>
<td>38</td>
<td>3.47</td>
<td>3.73</td>
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<tr>
<td>Math Achievement</td>
<td>147</td>
<td>62.60</td>
<td>15.71</td>
<td>60</td>
<td>57.70</td>
<td>12.54</td>
<td>38</td>
<td>56.74</td>
<td>21.32</td>
</tr>
<tr>
<td>Reading Achievement</td>
<td>149</td>
<td>79.89</td>
<td>12.06</td>
<td>60</td>
<td>77.12</td>
<td>8.06</td>
<td>38</td>
<td>74.53</td>
<td>16.61</td>
</tr>
</tbody>
</table>

Table 5

One-Way Analysis of Variance Results for Dropout Rates by School Size and Location

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>df</th>
<th>F</th>
<th>eta^2</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>School Size</td>
<td>2</td>
<td>6.05</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>School Location</td>
<td>2</td>
<td>7.86</td>
<td>.06</td>
<td>.00</td>
</tr>
</tbody>
</table>
The third hypothesis investigated whether or not there were significant differences in student math and reading achievement based on school size. A one-way ANOVA was calculated and significant differences were found by school size for math achievement \((F[2, 242] = 3.62, p=.03)\), but not for reading \((F[2, 244] = 2.49, p =.09)\). For both one-way ANOVAs, Levene’s Test of Homogeneity of Variance was not significant. Tukey Post Hoc multiple comparisons found significant differences in math achievement between medium-sized schools and small-sized schools. However, the findings indicated that small schools had significantly higher math scores than medium schools. Table 4 indicates the findings from the third hypothesis.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>eta²</th>
<th>p</th>
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<tbody>
<tr>
<td>Math Achievement</td>
<td>2</td>
<td>3.62</td>
<td>.03</td>
<td>.03</td>
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<tr>
<td>Read Achievement</td>
<td>2</td>
<td>2.49</td>
<td>.02</td>
<td>.09</td>
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</tbody>
</table>

*Zero-Order Correlational Analysis*

A zero-order correlational analysis was run to investigate the relationships among student characteristics, like gender, ethnicity and SES and school characteristics like size and location. The purpose was to see how these variables interact to affect student achievement. Several significant relationships were found. Male reading achievement was significantly negatively
Table 7  Zero-Order Correlational Analysis

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<td>.55**</td>
<td>.55**</td>
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</table>

*p<.05.  **p<.01
related to school size ($r = -.26, p<.01$), school location ($r = -.25, p<.01$) and dropout rates ($r = -.24, p<.01$). Female reading achievement was significantly negatively related to school location ($r = -.16, p<.05$) and dropout rates ($r = -.21, p<.01$). There were significant negative relationships between low SES reading achievement and school size ($r = -.20, p<.01$), school location ($r = -.23, p<.01$) and dropout rates ($r = -.26, p<.01$). Minority reading achievement was significantly negatively related to dropout rates ($r = -.46, p<.01$). Male math achievement was significantly negatively related to dropout rates ($r = -.28, p<.01$). Female math achievement was also significantly negatively related to dropout rates ($r = -.27, p<.01$). There were significant negative relationships between low SES math achievement and school size ($r = -.22, p<.01$), school location ($r = -.24, p<.01$) and dropout rates ($r = -.187, p<.01$). Minority math achievement was significantly negatively related to dropout rates ($r = -.49, p<.01$). Table 5 shows the results of the zero-order correlational analysis.
CHAPTER 5
DISCUSSION

This study tested three hypotheses related to high school effectiveness. Significant results were found, although not all results supported the research hypotheses. First, a significant difference was found between school size and student dropout rates. This finding supported the first hypothesis of the study, which predicted that large schools would have higher dropout rates than small or medium sized schools. This relationship is consistent with previous research that has found evidence of higher dropout rates in larger schools (Lee & Burkam, 2003; Rumberger & Palardy, 2005). The second hypothesis postulated that urban high schools would have higher dropout rates than suburban or rural high schools. Urban schools were found to have the highest mean dropout rates, suburban schools had the next highest mean dropout rates and rural schools had the lowest mean dropout rates. A significant difference was found in the mean dropout rates of urban schools and rural schools which supported the research hypothesis. The few previous studies on school location and dropout rates that had been conducted found contradicting results (Rumberger & Larson, 1998; Rumberger & Thomas, 2000).

The final hypothesis predicted that medium sized high schools would have higher rates of student achievement than small or large-sized high schools. However, the results of this study found that schools of medium sized had significantly lower student achievement than either small or large schools. Schools of medium size were also found to have higher dropout rates than small schools. The dropout rates of medium-sized schools were nearly as high as large schools. These findings contradict several previous studies which found medium sized school to have higher student achievement and lower student dropout rates than small or large sized schools.
(Lee, Bryk, & Smith, 1993; Lee & Smith, 1995; Lee, Smith & Croninger, 1997). Some possible reasons for these contradictory findings will be discussed later in the chapter.

**Student Characteristics**

This study also included student characteristics of gender, ethnicity, and SES in its correlational analysis. Previous research has shown student characteristics to be the strongest predictor of student outcomes (Coleman, et al., 1966; Goldschmidt & Wang, 1999; Lee & Burkam, 2003; McNeal, 1997; Rumberger & Palardy, 2005; Rumberger & Thomas, 2000). Several significant relationships were found between student characteristics and the student outcomes of achievement and dropout rates. The student characteristic with the most correlations to other variables in the study was low SES student achievement. Low SES student achievement in math and reading was found to be significantly and negatively correlated to school size, school location and dropout rate. These results indicate that there is a relationship between the achievement of low SES students and the type of school they attend, with achievement being lower in large and urban schools. Consistent with Sirin (2005), there is evidence to suggest that small schools and rural schools may moderate the impact of SES on student achievement. There are several possible reasons for this moderating effect. First, research has shown that student learning is more equitable in smaller schools which have a constrained curriculum (Lee & Burkam, 2003; Lee, Smith, Smith & Croninger, 1997; Lee & Smith, 1997). This allows low SES students to perform at a level similar to their peers and share a similar academic experience. Also, small schools generally have smaller student to teacher ratios, which makes it possible for teachers to build stronger bonds with students and provide more support for students at risk. In large schools, these students at risk for failure and dropout are more likely to be lost in the
crowd. Whatever the reasons, it appears that low SES students benefit from the qualities inherit to small schools.

*Multiple Indicators of School Performance*

This study sought to answer three basic questions concerning school effectiveness using student outcomes of achievement and dropout rates. The first question asked if schools that were effective in terms of student achievement were also effective in terms of student dropout rates. This study found that the schools with the highest achievement also had the lowest dropout rates, which answers the first question affirmatively. The results of the one-way analysis of variance indicated that small schools and rural schools had the highest mean achievement scores and the lowest mean dropout rates. This supports the results of some studies that have found that students with low achievement are more likely to dropout than those with high achievement (Lee & Burkam, 2003; Riehl, 1999; Rumberger & Larson, 1998; Zvoch, 2006).

The second question addressed whether or not school effectiveness varied according to structural characteristics of school size and location. Results indicated that the most effective schools in Kansas enrolled fewer than 600 students and were located in rural school districts. This may be due to the fact that rural schools in Kansas have very low minority populations. However, many of the rural schools in this study enrolled significant numbers of economically disadvantaged students. According to this study, school effectiveness does vary according to school size and location.

The last question asked if the results of this study supported the differentiated view or the common view of the schooling process. The common view proposes that all aspects of student outcomes are similarly influenced by school characteristics. The differentiated view suggests that different student outcomes are affected by different school characteristics. This question is
difficult to answer due to the fact that this study was only able to compare two indicators of school effectiveness. However, the two indicators which were examined supported the common view of the schooling process as both indicators appeared to be similarly influenced by school characteristics of size and location.

Limitations

Although this study found significant results, there were several limitations of the study which may have affected the quality of the research. First, this study meant to compare three measures of school effectiveness but was only able to obtain and analyze data on student achievement and student dropout rates. Data concerning student transfer rates was unavailable during data analysis and therefore limited the scope and strength of the study. The results of this study may have been quite different if three measures of school effectiveness had been compared. For instance, Rumberger and Palardy (2005) found that small schools were not any more effective than medium or large sized schools in regards to transfer rates. However, they did find that rural schools were more effective than urban schools when transfer rates were analyzed. Since Kansas is a state of largely rural schools and this study found small rural schools to be the most effective in terms of student achievement and student dropout rates, it would have been very interesting to learn if these types of Kansas schools were also effective in regards to student transfer rates.

The accuracy of dropout rate data composes a second limitation of this study. Dropout rates are reported by schools and there may be some inconsistency in the way individual schools report this information. Due to the pressure schools are under to keep dropout rates low, it is possible that schools may alter the criteria for classifying a student as a dropout in an effort to reduce dropout rates (Riehl, 1999). This study found that most schools reported surprisingly low
dropout rates compared to other studies of national data sets, which have found an average dropout rate of about 7% and dropout rates as high or higher than 20% in some large urban schools (Lee & Burkam, 2003; Rumberger & Palardy, 2005; Rumberger & Thomas, 2000). Kansas schools reported a mean dropout rate of less than 2% for the 2005-2006 school year. Many rural schools in this study reported dropout rates of 0% and even urban high schools located in the Wichita school district did not report dropout rates higher than 9%. It is not known whether Kansas schools truly have dropout rates much lower than national averages or whether the data on dropout rates were inaccurate.

Another limitation of this study is that data on medium sized high schools may have been skewed. Several Kansas City schools fell into the category of medium sized schools although they were probably not representative of the average medium sized school in Kansas. These inner city schools reported minority populations between 70% and 94%, had high numbers of economically disadvantaged students and also reported some of the lowest achievement scores of the entire sample.

Finally, the results of this study do not represent high schools nationally and can only be generalized to schools in the state of Kansas. Also, classifying schools as urban, suburban or rural according to generic population parameters may not have been the most appropriate way to define location in this study. It is very possible that if location were defined differently the results of the study may have changed. Much of the research that does define school location uses national data sets which may already be classified as urban, suburban or rural. Therefore, it was difficult to find a standardized system for defining location other than using population.
Suggestions for Future Research

The issue of school effectiveness should remain a relevant research topic as the No Child
Left Behind Act will continue to increase the requirements for student achievement and
eventually for student dropout rates. More research is needed to discern what types of schools are
effective in terms of all student outcomes, not just test performance. The importance of studying
student transfer rate data should not be underestimated as previous research has shown it to be
strongly correlated to dropping out of high school (Rumberger & Larson, 1998; Rumberger &
Thomas, 2000). Also, school location is a variable which should continue to be examined when
studying high school effectiveness. One way to make this variable easier to study would be to
create a standardized classification system for defining rural, urban and urban schools.

This study attempted to identify what types of Kansas schools are most effective in terms
of student outcomes and found that rural schools with less than 600 students perform best.
However, more studies are needed to determine whether these results can be generalized to other
populations in other areas. There has been quite a bit of research which supports the belief in
creating smaller high schools ((Lee, Bryk, & Smith, 1993; Lee & Smith, 1995; Lee, Smith &
Croninger, 1997). In order to convince policymakers in Kansas to adopt this belief and turn it
into practice, much more research will be needed.

Unfortunately, this study found that access to state level data was not easy to obtain.
Although the state of Kansas posts the Building Report Card for all Kansas schools on its public
website, the data are not in a useable format. Researchers who wish to use this data then have
two options available to them. The first option is to submit an electronic data request to the state
and wait for a reply, although not all data requests are filled. For those data requests that are
filled, there can be a substantial waiting period and a fee applies for all requests that take longer
than an hour and a half. The second option for researchers is to spend many hours converting the data into an analyzable format, as was done in this study. However, not all data are available via the website. In such a case, researchers would have to decide if obtaining the data are worth the obstacles in their way or if they should simply move on with the data that are available. The researchers in this study chose the second option although it limited their study. The implications of limiting access to what should be public data seem clear. Researchers will be less likely to conduct studies using state level data and important decisions about education will not have research to support them. In order to improve our schools, better data collection is needed and data need to be made more readily available to researchers.

Conclusions

Studies on school effectiveness have traditionally followed the common view of the schooling process, believing that all student outcomes are similarly influenced by school characteristics. Rumberger and Palardy’s study (2005) was the first to look at a differentiated view of the schooling process when they researched school effectiveness using multiple indicators of student performance. This study measured the effectiveness of Kansas schools through the variables of student achievement and student dropout rates but did not find support for the differentiated view of the schooling process. More research is needed to determine which measures of student performance should be studied and which theoretical viewpoint is more appropriate when researching school effectiveness.
LIST OF REFERENCES


