

## Similar Students—Dissimilar Opportunities for Success

### High- and Low-Achieving Elementary Schools in Rural, High Poverty Areas of West Virginia

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*The purpose of this study was to advance the understanding of effective and less-effective elementary schools in rural, high poverty areas of West Virginia. This was an exploratory and descriptive study that involved qualitative and quantitative data on paired high- and low-achieving rural schools with similar student demographic and socioeconomic characteristics. The total study included schools in rural and nonrural areas; survey data from 82 teachers, 632 parents, and 670 students; and interview data from 50 parents, teachers, and administrators. The Diagnostic Assessment of School and Principal Effectiveness was used as the survey instrument. It was found that high-achieving rural schools in high poverty areas had shared characteristics that were very different from the low-achieving rural schools with equivalent rates of poverty. Overall, there appeared to be a greater difference in school programs and the attitude of employees across schools than in the students attending the schools.*

The purpose of this study was to advance the understanding of effective and less effective elementary schools in rural, high poverty areas of West Virginia. For the past 35 years, researchers have attempted to define what makes a school effective. Definitions vary from simple measures of high student achievement to complex measures of teachers' and students' attitudes and behavior (Westbrook, 1982). Ron Edmonds popularized the notion that in effective schools with a predominantly low-income minority student body, students consistently performed on standardized tests well beyond what was expected of them (Teddlie & Stringfield, 1993). According to Murnane (1983), the most important lessons learned from quantitative research on the determinants of school effectiveness are: (a) schools make a difference; (b) teachers are a critical resource; (c) the composition of the student body matters; and (d) physical facilities, class size, curricula, instructional strategies, and other resources influence student learning indirectly through their effects on the behavior of teachers and students.

This study defined effective schools as those with a high level of student achievement compared to schools with the same rate of participation in the free-and-reduced-price meals program, but with a substantially lower level of student achievement. The major question of the study was: Why are students achieving at a high academic level in one school and at a low academic level in another school? To

operationalize the research question, the study sought to identify the characteristics, commonalities, and differences of selected high- and low-achieving schools with similar students.

#### Methods

This was an exploratory and descriptive study that involved qualitative and quantitative data in the form of observations, interviews, and an effective schools survey.

In the first phase of the project, 560 elementary schools were ranked from high to low on a 5-year average (1988-1989 to 1992-1993) of the third grade basic skills composite score on the Comprehensive Test of Basic Skills (CTBS); 17 school variables were examined over the 33 highest and 33 lowest-ranked achieving elementary schools. The major finding of this part of the study was that the lowest-achieving schools, compared to the highest-achieving schools, had 2.5 times more students receiving free-and-reduced-price meals and teachers with lower education levels and less experience. With this limited amount of information, the connection between low achievement and low teacher education and experience level was obscure. We did note that a number of elementary schools, despite a high percentage of needy students, were achieving at high levels, and other schools with fewer such students were achieving less well.

The second phase of the study focused on selecting pairs of elementary schools, each with similar student de-

Table 1  
*Selected Elementary Schools*

Achievement Level	Free-and-Reduced- Price Meal Participation Rate	Grade Levels	Enrollment	Rural/ Nonrural
1 High-achieving	65%	PK-4	299	Rural
1 Low-achieving	66%	K-5	257	Rural
1 High-achieving	87%	K-6	157	Rural
1 Low-achieving	87%	K-8	209	Rural
1 Moderately high 3rd & increasing 6th	16%	K-6	315	Nonrural
1 Moderately high 3rd & decreasing 6th	15%	K-6	281	Nonrural
1 Highest-achieving in State; No match	10%	K-5	265	Nonrural

mographic and socioeconomic characteristics but different levels of student achievement.

#### *Selection of Schools*

These schools were selected by a blind review of residual scatter plots that had been constructed from a regression of the 5-year average (1988-1989 to 1992-1993) of standardized achievement scores on a 2-year average (1991-1992 to 1992-1993) of free-and-reduced meals data for 560 elementary schools, representing 153,129 students. The high- and low-achieving schools with similar rates of free-and-reduced-lunch participation were identified from the scatter plots. This procedure was conducted for elementary schools with a third grade and no sixth grade, and then separately for schools with a third and a sixth grade.

Seven elementary schools were selected from the residual plots: three pairs of high- and low-achieving schools plus the highest achieving elementary school in the state. Each school was located in different parts of the state and in both rural and nonrural areas. These schools, shown in Table 1, were selected for in-depth analysis. Specifically, this paper will address the characteristics, commonalities, and differences of the high- and low-achieving elementary schools that were located in the rural areas.

#### *Data Collection*

Letters were mailed to the principal of each selected school, followed by a phone call and a visit to seek permission to collect data on the school. Group meetings were held in each school with the teachers to explain the research project and the process. All selected schools agreed to be part of the research project.

Data were collected on each selected school in the format of observations, interviews, and an effective schools survey. Unstructured interviews were conducted in each school by an experienced and qualified researcher. It was

the consensus of the four-member team of research consultants that unstructured interviews were to be conducted in order to allow the interviewees enough freedom to convey everything they felt would describe their schools accurately.

Approximately 50 teachers, parents, and administrators from the seven schools were interviewed. Interviews were taped and transcribed. In addition to the interviews, site observations were made by two researchers. Observations recorded the form of school location, condition, appearance, and terrain; community appearance, business locations, distance to nearest business district; and student appearance and actions.

A school climate survey (KanLEAD, 1988) was chosen to measure the perceptions of school effectiveness by those involved in the school and was administered to 630 parents, 670 students, 82 teachers, 7 principals, and central office staff of the 7 schools. Surveys were administered to third, fourth, fifth, and sixth grade students by their teachers. Surveys for parents were sent home with individual students to be returned in sealed envelopes to the homeroom teacher or mailed to the research office. The parent package included a letter explaining the research project, the survey, a pencil, and a return envelope.

#### *Analysis of the Survey Data*

There were eight subscales on the survey for students, for teachers there were seven, and for parents there were five. The strategy was to globally analyze the student subscales from all seven schools using multivariate analysis of variance. If this global analysis did not meet the decision criterion ( $\alpha = .01$ ), the analysis ceased. If the decision criterion was met, then a global analysis of the subscales for the three pairs of schools, again using multivariate analysis of variance, was conducted. The same procedure was followed for responses on the teachers' and parents' surveys. In order not to overlook important information that

may have been camouflaged by a total scale score, an examination of each question within a scale across schools was conducted using multivariate analysis of variance.

### *Interview Data*

The transcribed interview tapes were analyzed by two researchers who did not conduct the interviews. Interview data were analyzed to yield themes for each pair of schools. Data thus analyzed were used to corroborate findings from the analyses of survey data. Interview and observation data help strengthen the descriptions of, and conclusions about, these schools.

### Findings

This section presents an overview of the selected schools located in rural,<sup>1</sup> high-poverty areas of West Virginia, their students, parents, and communities. Paired high- and low-achieving schools are #1 and #2, and #4 and #5, respectively. Throughout this summary, the term “needy” is used to describe the percentage of free-or-reduced-price meals participants.

#### *Overview of Schools and Their Students, Parents, and Communities*

*School #1 (rural, high needy, low achieving).* School #1 (K-5, 257 enrollment, 66% needy) is located in a rural, poverty-stricken area at the southern end of a county district.<sup>2</sup> For years, the area has been considered a closed society, isolated, and, until the present highway was built, difficult to reach.

The interview data indicated that the children in this area have been to very few places outside of the area and could be viewed as foreigners by the outside world. Dysfunctional families, student health problems, lack of medical facilities and student behavior were cited by interviewees as being some of the major obstacles to the education process.

The single-story school adjoins a concrete playground without playground equipment. An adjacent two-story building houses the junior high school. A mountain, a high-

way, and a railroad track close in on one side of the school grounds and a creek and a mountain close in on the other side. In order to reach or leave the school, research team members sometimes waited 10 to 20 minutes at the railroad crossing.

According to interviewees, the school is known as a “turn-over school,” one with a history of teachers bidding out to other schools during the year or at the end of 1 or 2 years. Only 33% of the present faculty have been at the building 5 years or longer. Most of the teachers live at the other end of the county and commute a full hour to reach the school.

Sixty-six percent of the students receive free-or-reduced-price meals. The education level of the parents is low: 80% of the fathers and 69% of the mothers of students surveyed have a high school education or less (36% of fathers and 25% of mothers have less than a high school education); 14% of the fathers and 18% of the mothers have a college or graduate degree.

Test scores for the school have traditionally been low. Over a 5-year period (1988-1989 to 1992-1993), the average third grade percentile rank for Basic Skills ranged from the 23<sup>rd</sup> to the 49<sup>th</sup> percentile. Seventy-one percent of the students in the third, fourth, and fifth grade were surveyed (80 out of 112 students).

*School #2 (rural, high needy, high achieving).* School #2 (PK-4, 299 enrollment, 65% needy) is located in the county seat, the business center for the county and close to a major four-lane highway. The school reportedly receives more attention than other elementary schools in the county and has maintained a stable faculty for 20 years. Interview data indicate that teachers *want* to be at this school. More than 77% of the faculty have served there at least 5 years. The location of the building, on the side of a steep hill in a residential area with no parking space for faculty or parents, was a frequently expressed concern among interviewees.

The school acts as a “search and serve school,” looking for and serving students in need. The superintendent noted the prevalence of poverty in the area and the high percentage of at-risk students in the school.

The parents’ education level is higher in School #2 than in School #1 despite similar free-and-reduced-price meal participation rates. Fifty-six percent of the fathers and 45% of the mothers of the students surveyed have a high school education or less (13% of fathers and 8% of mothers have less than a high school education); 31% of the fathers and 33% of the mothers have a college or graduate degree.

Test scores have been high for years. Over a 5-year period (1988-1989 to 1992-1993), the average third grade percentile rank for Basic Skills ranged from the 72<sup>nd</sup> to the 94<sup>th</sup> percentile. Ninety-one percent of the students in the third and fourth grade were surveyed (80 out of 88 students).

<sup>1</sup>An area with 2,500 inhabitants or fewer and/or a population density of less than 1,000 per square mile. Source: United States Department of Education, National Center for Education Statistics, Office of Educational Research and Improvement, Common Core of Data CCD Disc.

<sup>2</sup>All school districts ( $n = 55$ ) are coincident with county borders. All are fiscally independent as well. Readers should also realize that Education Week (*Quality Counts*, 1997) rates West Virginia as the second most equitably funded state system in the nation (after Hawaii, with its single district).

*School #4 (rural, isolated, high needy, low achieving).* School #4 (K-8, 209 enrollment, 87% needy) is located in an isolated area that no one planned to call home during the 1920s and 1930s when the coal companies were pushing roads in to develop coal mines and build houses for workers. At that time, there was no long-term planning for quality of life in the coal fields, no sewer systems were planned, and today the creeks are still open sewers. Poverty is pervasive and long-standing. Four to five generations of some families have received public assistance.

The two-story school building is not close to anything except a single row of houses along the creek bed. The area is rural, poor, and isolated. A mountain and a two-lane highway close in one side of the school and a creek and a mountain close in the other side. The closest shopping mall is 60 miles away and grocery shopping is 25-30 miles away across two mountains. Housing in the area is substandard; public infrastructure is also substandard, given the lack of public sewer.

The school has traditionally been a turn-over school. At the present time, about 46% of the faculty have served at the school 5 years or longer. About 75% of the faculty commute 1 hour to the school and as noted in the interview data, "Over pretty treacherous roads during the winter months."

Over 82% of the fathers and 80% of the mothers of the students surveyed have a high school education or less (50% have less than a high school education) and about 3% of the parents have a college or graduate degree.

Test scores for the school have traditionally been low. Over a 5-year period (1988-1989 to 1992-1993), the average third grade percentile rank for the Basic Skills of the CTBS ranged from the 30<sup>th</sup> to the 40<sup>th</sup> percentile for 5 of the years and the 75<sup>th</sup> percentile for 1 year. Seventy percent of the students in the third, fourth, fifth, and sixth grades were surveyed (38 out of 50 students).

*School #5 (rural, high needy, high achieving).* School #5 (K-6, 157 enrollment, 87% needy) is located in a poor, rural area with high rates of public assistance, some working poor, a large number of single parents, alternate lifestyle families, and families in transit. There are no stores or businesses in the immediate area, but a small town is located 10 to 15 miles away over a fairly level road and a larger urban area is located one hour away. The community consists of a row of houses along the creek bank that runs parallel to the two-lane highway. The two-story school building is located across the highway from the homes.

About 88% of the fathers and 84% of the mothers of students surveyed have a high school education or less (41% of the fathers and 43% of the mothers have less than a high school education) and about 3% of the fathers and 8% of the mothers have a college or graduate degree. The interview data indicated that the most important thing that many

of the children look forward to is when the public assistance check arrives on the first of the month. Eighty-four percent of the students in the third, fourth, fifth, and sixth grades were surveyed (76 out of 90 students).

The faculty has remained stable over the years, is experienced, and well educated. Approximately 78% of the faculty have served at the school 5 years or longer, and have educational attainment greater than a Masters degree. All have more than 5 years of teaching experience. About one-half grew up in the area and now live there; the drive is between 30 minutes and 1 hour to reach the school.

Test scores have been high over the years considering the adverse conditions of the students' environment. From 1988-1989 to 1992-1993, the average third grade percentile rank for the Basic Skills of the CTBS ranged from the 70<sup>th</sup> to the 80<sup>th</sup> percentile for 4 of the years and dropped to the 50<sup>th</sup> percentile for 1 year; the sixth grade percentile rank was in the high 70s and 80s during the past 4 years.

#### *Analysis of Socioeconomic Status (SES)*

The schools were matched based on grade and the percent of students who received free-or-reduced-price meals. Through the surveys for students, two more indicators of SES were obtained: father's education and mother's education. To check the assumption of comparable SES within each pair of schools, the distribution of mothers' levels of education and fathers' levels of education was tested. A Chi-square test ( $\alpha = .01$ ) of independence was used for this analysis.

For Schools #1 and #2, the distribution of fathers' educational levels were different ( $p = .006$ ), but evidence was inconclusive relative to the mothers' educational levels ( $p = .021$ ). Given that in both schools approximately 65% of the students qualified for the lunch program and both schools qualified for Chapter I funds, the comparison of these two schools continued. For Schools #3 and #4, no evidence of difference between fathers' or mothers' levels of education ( $p = .57$  and  $p = .23$ , respectively) was found. In both schools 87% of the children received free- or reduced-price meals, and the schools qualified for Chapter I funds. These two schools were well matched on indicators of SES.

#### Comparing the Schools

This study sought to account for the differences in levels of student achievement in two pairs of schools matched by SES levels (i.e., School #1 compared to School #2 and School #3 compared to School #5). Because the investigation examined a complicated, multidimensional subject, the answer to be given cannot be simple. This section presents interview and survey results for the two pairs of schools.

*Comparison of Interview Data (School #1 vs. School #2)*

The location of the rural school may have an indirect effect on the success of the school. High-achieving School #2, located in the same town as the school district's central office, has over the years enjoyed high visibility and many available services of potential help to students (e.g., school psychologist, counselors, occupational therapist, preschool handicapped program, speech therapist, early identification). Low-achieving School #1, located approximately one hour from the central office, is, in essence, out of sight and out of mind. It receives far fewer services of the sort available at School #2.

School #1 interviewees, quoted next, amplify some of the themes enumerated in Table 2:

The community just existed there. During flood season you couldn't get there at all. Some of these children have never been anywhere, they have no background as far as outside activities are concerned, they have no vocabulary level to deal with anything except what takes place in their own community. For years the central office did not pay much attention to the remote elementary schools. For years, we've been screaming: "We need help! We need help!" The test scores have traditionally been low for years and years and years.

Table 2 summarizes the themes imputed from interview data characterizing School #1 and School #2. Column 1 identifies the relevant theme, and columns 2 and 3 make the connection to School #1 and School #2, respectively.

*Comparison of Interview Data (School #4 vs. School #5)*

In Schools #4 and #5, interviewees talked about the low educational aspirations parents held for their children, low parental involvement in school activities, public assistance as a way of life, poor housing conditions, lack of jobs in the area, deteriorating work ethic, and the adverse effects of home and community environment on student achievement. In addition, a majority of the interviewees from low-achieving School #4 talked about the difficulty of motivating children. Researchers concluded that interviewees felt helpless and attributed this helplessness to adverse conditions in the community.

High achieving School #5, faced with the same adverse problems as School #4, had at least 5 years of students achieving at a moderate to high level. The teachers in School #5 talked about changing student attitudes as a top priority, providing a warm and caring place for students to come to, maintaining high expectations for each student to succeed, and instilling self-reliance in the stu-

dents. There was evidence that Schools #2 and #5 struggled to overcome the alleged adverse effects of home and community environment, but there was little such evidence for Schools #1 and #4.

Interviewees from isolated School #4 indicated that very few people came to the school from the central office or from other places; whereas, moderately high-achieving School #5 interviewees indicated that help was nearby, and individuals from the central office were often in the building. Table 3 presents themes imputed from interview data to characterize School #4 and School #5, and it is organized like Table 2.

*Survey Data*

The teachers in low-achieving Schools #1 and #4 gave the least positive responses on the survey scales relating to the teachers' view of the school and of themselves. Both of the low-achieving rural schools are drive-in schools and for many years have experienced high teacher turnover.

In paired schools #1 and #2, statistically different responses were evident on staff morale (adequate work conditions, harmonious staff relationships), staff commitment (acceptance of the school's values; desire to remain an employee of the school), and job satisfaction (the degree to which the teacher likes his or her job). In Schools #4 and #5, significant differences were found in school integration (the school's ability to unify school tasks necessary for achievement), goal attainment (the school's ability to define and achieve goals), school adaptation (the school's ability to deal successfully with parents, the community and change), and staff morale. Table 4 compares teacher responses from the low and high-achieving rural schools on selected questions.

Every responding teacher from the rural, high-achieving schools indicated a desire not to leave the school for any other. In other words, they *want* to be in their schools. This could not be said for 75% of the responding teachers in low-achieving School #1 and 31% in low-achieving School #4.

Responding students in both School #1 (low-achieving) and School #2 (high-achieving) had similar scores on the eight survey scales: (a) school norms (expectations of performance); (b) school adaptation (ability to deal successfully with parents and community); (c) academic futility (relation between student effort and rewards); (d) school integration (ability of school to organize and unify school tasks necessary for achievement); (e) school maintenance (ability to create and maintain motivational and value structure); and the three student measures (self-concept, self-reliance, and motivation).

The responding students from Schools #4 and #5 had similar responses on five of the eight survey subscales relating to the students' view of the school and of themselves,

Table 2

*Summary: Areas of Identified Differences from the Interview Data Schools #1 & #2*

Areas of Difference	School #1 - Low-achieving 66% Needy	School #2 - High-achieving 65% Needy
1. Community location: Proximity to Central Office & School Board	Isolated One hour to Central Office Low visibility	Located in County Seat Same town-Central Office High visibility
2. Lives of Children & Adverse Conditions	School has not overcome	School has overcome
3. Available services	Lacking	Full services
4. Students working on grade level	Working below	On level 95% successful
5. School Board & Central Office support	Improving	Very strong
6. Staff stability	Drive-in school High turnover	Very stable Low turnover
7. Instructional Leader	Not identified	Teachers
8. Testing	3rd Grade	All grades
9. Testing readiness	In process of increasing preparation	Constant, long-term preparation
10. Accountability	No discussion State holding school accountable	Teachers are held accountable by the system & themselves
11. Teachers working as a team over time	No—High staff turnover	Yes—Teacher orchestrated
12. Five or more years in this building	38% of the teachers	76% of the teachers
13. Pre-kindergarten	No	Yes
14. Home visits	No	Yes
15. Principal/teacher relations	Conflict	No conflict—supportive
16. Parental involvement	No PTO Have volunteers	Limited PTO Have volunteers

Table 3

*Summary: Areas of Identified Differences from the Interview Data Schools #4 & #5*

Areas of Difference	School #2 - Low-achieving 87% Needy	School #4 - Mod. High-achieving 87% Needy
1. Community location: Proximity to Central Office & School Board	Isolated 45 minutes to Central Office Low visibility	Rural 20 minutes to Central Office Moderate visibility
2. Lives of children & adverse conditions	School has not overcome	School works hard to overcome
3. Available services	Not addressed	Not addressed
4. Students working on grade level	Low 3rd, Low 6th but increasing	Moderately high 3rd Moderately high 6th
5. School Board & Central Office support	Lacking	Available when needed
6. Staff stability	Drive-in school High turnover	Stable Low turnover
7. Instructional leader	Not identified	Teachers/principal
8. Testing	3rd & 6th Grades	3rd & 6th Grades
9. Testing readiness	In process of increasing preparation	Long-term preparation
10. Accountability	State holding school accountable due to low scores	Teachers hold themselves accountable
11. Teachers working as a team over time	No—High staff turnover	Yes—Teacher/principal orchestrated
12. Five or more years in this building	46% of the teachers	67% of the teachers
13. Pre-kindergarten	No	No
14. Business partners	No—None in the area	Yes—Active
15. Principal/teacher relations	Appears to be supportive - Principal's first year	Supportive, interactive team work
16. Parental involvement	Low PTO Have volunteers	Low PTO Have volunteers

Table 4

*Teachers' View of the School: Percentage Responding "Strongly Agree" or "Agree"*

Achievement Level: School Identification: Percent Free/Reduced Lunch:	Low #1 66%	Low #3 87%	High #2 65%	High #4 87%	All Seven Schools Combined
The climate in this school is poor.	63%	54%	0%	0%	16%
The communications in this school are good.	13%	31%	88%	100%	74%
Administrators and teachers work together.	0%	31%	82%	89%	72%
This school is an excellent organization.	13%	31%	88%	89%	74%
I would leave this school for any other.	75%	31%	0%	0%	16%
Number of Responding Teachers	8/13 (61%)	13/15 (87%)	17/24 (71%)	9/10 (90%)	82/110 (75%)

including the student scales. These scores were also low in comparison to all the other schools in the study. Significant differences were noted with respect to school integration, school maintenance, and student motivation.

Table 5 compares student responses from low-achieving Schools #1 and #4 and high-achieving Schools #2 and #5 for individual items related to student arguments, student pride in the school, respect for teachers, and other selected variables. Whether or not these differences reflect operation of the schools is difficult to judge, but interviewees from the low-achieving schools suggested that frequent student arguments originated in complex student problems (family, medical, and social) that had not been addressed in those schools.

The similarity in the responses of the students from the two rural, low-achieving schools and the two rural, high-achieving schools on many of the questions is remarkable especially in view of the fact that the schools are located in different counties and different parts of the state, and there was no communication between the schools during the time of the survey. At no time did the researchers disclose the identity of the schools in the study to anyone.

The most alarming responses were from the parents. In both pairs of high- and low-achieving rural schools there were few statistically significant differences in the parents' responses on 52 questions regarding the schools. Overall, the parents' responses from high-achieving School #2 were less positive than the ones from the parents of low-achieving School #1, even though there were few statistically significant differences on the individual questions. The only explanation from the interview data for the low positive perception of the parents of high-achieving School #2 is

the great effort undertaken by the school to make sure that students are successful. As one individual stated, "The teachers are really into this business of pushing kids, of trying to get everything out of those kids and they're probably having to fight parents to do that." Academic success appears to have come at the expense of parents' approval and acceptance. The comparatively lower response rates at the low-achieving schools, however, may entail response bias such that the most disaffected parents did not return surveys, thus influencing the rating for those schools. Table 6 presents responses from parents on selected questions concerning the high- and low-achieving schools.

The parents' low positive responses concerning the rural schools in this study, plus their low involvement with the schools, draws attention to the role of the parent in areas with high poverty and low education levels. The teachers in high-achieving School #2 are according to interviewees, "pedaling about as fast as they can" and "having to fight parents to do that." The administrators at the low-achieving rural schools warned us that few parents would respond to the survey, and as the numbers indicate, there was a low response rate from the parents in those schools.

#### *Students' Overall Perceptions*

In general, the students from all seven schools (rural and nonrural) expressed positive perceptions of their schools and of themselves as students. A majority of the students surveyed feel they are expected to work hard, that they try hard to get good grades on tests, and that it is important to do well in school. The students from the rural, high poverty, high-achieving schools scored the *highest* of all 680



Table 5  
*Students' View of the School: Percentage Responding "Strongly Agree" or "Agree"*

Achievement Level: School Identification: Percent Free/Reduced Lunch:	Low #1	Low #4	High #2	High #5	All Seven Schools Combined
There are often arguments between students at this school.	76%	66%	37%	32%	43%
Students in this school respect the teachers.	65%	50%	83%	80%	77%
Students at this school are very proud of the school.	62%	37%	80%	79%	75%
I would quit school if I could.	30%	34%	14%	24%	15%
This school expects me to work hard.	93%	90%	94%	91%	94%
Students in this school want to do well.	80%	58%	91%	79%	84%
Students in this school are highly respected.	65%	63%	81%	81%	73%
Number of Responding Students	80/112 (71%)	38/50 (70%)	80/88 (91%)	76/90 (84%)	670/822 (82%)

students on student motivation (see Table 7). The students from low-achieving School #1 ranked fourth out of the seven schools surveyed on the motivation scale, but showed no statistically significant difference in their student motivation score and the score of their paired high-achieving School #2. There was a significant difference on the motivation scale between paired Schools #4 and #5.

The student motivation subscale (a student's motivation to attend school and the importance the student attaches to school) comprises the following nine questions:

1. I do not like to go to school.
2. There are a lot of places I would rather be than in school.
3. I would go to school in the summer if I could.
4. School is an interesting place and I enjoy it.
5. School is important to me.
6. School is very enjoyable to me.
7. The things that I study in school are not very interesting.
8. I am eager to go to school.
9. My friends like to go to this school.

Presented in Table 7 are the mean scores on the student motivation subscale (one of the eight subscales of the School Climate for Students part of the total *Diagnostic Assessment of School and Principal Effectiveness* survey) by the seven rural and nonrural schools in the total.

## Conclusions

The major question of this study was, "Why do similar types of students achieve at a high academic level in one school and at a low academic level in another school? To answer this question, high- and low-achieving rural schools with similar student demographic and socioeconomic characteristics were paired. From the analysis of the survey, interview, and observation data, the following characteristics were identified as shared among the two high-achieving elementary schools located in rural, high-poverty areas visited in this research project:

- high student achievement, irrespective of the percentage of needy students, parents' education level, parents' income level, or amount of parent involvement;
- low teacher turn-over, combined with a stable faculty that exhibits teamwork and the ability to set common goals and coordinate the instructional program;
- teachers who want to be at the school;
- high staff morale, job satisfaction, and strong teacher accountability;

Table 6  
*Parents' View of the School: Percentage Responding "Strongly Agree" Plus "Agree"*

Achievement Level: School Identification: Percent Free/Reduced Lunch:	Low #1 66%	Low #4 87%	High #2 65%	High #5 87%	All Seven Schools Combined
My child's school has high expectations.	49%	54%	52%	75%*	76%
I am satisfied with my child's school.	69%	68%	69%	82%*	81%
My child's school is highly respected.	52%	43%	60%	76%*	78%
Parents at my school are very loyal to the school and staff	63%	62%	48%	54%	73%
Student achievement is rewarded in my child's school.	85%	75%	78%	90%	85%
Number of Responding Parents	48/112 43%	40/113 (35%)	117/166 (72%)	72/93 (77%)	632/968 (65%)

\*Significant difference between Schools #4 & #5, contrast of paired coefficients at  $p < .01$ .

- teachers with high levels of education, experience, and commitment to the school and the students;
- a strong and determined attitude among teachers that children can and will achieve;
- teachers who identify and address individual student needs;
- infrequent student arguments, strong student pride in the school, high levels of mutual respect between teachers and students;
- high student motivation;
- high to moderately high attention paid to the school by the central office;
- availability of student services to offset the detrimental effects of poverty;
- an identified instructional leader and a coordinated, instructional program (e.g., teachers, the principal, or the superintendent; in some low-achieving schools, the West Virginia Department of Education has become the instructional force by designating the school "seriously impaired"); and

- a principal with an open communication style, who is supportive of the teachers and the academic program.

Combined with staff stability, the study found that the two high-achieving elementary schools in rural, high poverty areas had teachers that had been in their respective building longer, had more years of experience, were older and had a higher level of education than the teachers in the low-achieving rural schools. However, teacher education level and years of experience cannot be construed as direct reasons for higher achievement. The way teachers are assigned to schools and the rule of seniority exert a likely confounding influence. (In West Virginia, seniority entails job preference.)

The analysis recognized a number of characteristics identified with, and sometimes shared among, the two rural schools designated as low-achieving. Many of these traits are the polar opposites of those found in high-achieving schools. Several others entail the problem of high staff turnover in isolated rural schools. None of these characteristics is separately an indicator of a low-achieving school; however, the two low-achieving rural schools in this study do share many of the following traits. They are:

- high staff turn-over; teachers bidding out during the school term or after 1 or 2 years;
- no continuity in instructional program due to the high staff turn-over;

Table 7  
*Student Motivation (9 items, possible range 9-36)*

School	Rank	<i>M</i>	<i>SD</i>	Number Responding
Rural, Low-achieving School #1	4	20.5	6.2	72
Rural, High-achieving School #2	2	19.4	5.9	73
Rural, Low-achieving School #4	6	22.4	8.0	37
Rural, High-achieving School #5	1	18.7	6.2	73
Nonrural, School #6	7	23.3	5.6	118
Nonrural, School #7	5	21.1	5.3	135
Nonrural, School #3 Highest-achieving in the State	3	19.6	4.9	134

*Note:* A low mean score is considered more desirable.

- teachers not perceived as part of the school community;
- prevalent attitude by the faculty that students will fail because of their home environment;
- no identified instructional leader;
- limited special student programs to offset the detrimental effects of poverty;
- frequent student arguments;
- low student pride, low student respect for the teachers, and the perception of students that they are not respected;
- low student motivation by faculty or administration;
- low school visibility to or involvement by the school district's central office; and
- limited access to external opportunities.

Interview and survey data suggest that the two rural, low-achieving elementary schools in this study were drive-in schools with a history of high staff turnover, low continuity of instructional programs, low central office support, low student pride in the school, low student respect for the

teachers, and frequent student arguments. The opposite was found for the two rural, high-achieving elementary schools in the study.

The levels of parent education, parent involvement, and parent approval of the schools were low in both the high- and low-achieving rural schools. The opposite was recorded for the nonrural elementary schools in the total study, all of which enjoyed high levels of parent education, parent involvement, and parent approval.

The students' responses across the rural and nonrural areas in this study indicate that even though the schools and communities are different, the relative perceptions of a majority of the students are about the same concerning school and work standards, expectations for a high performance level by the school and the desire to do well in school.

In summary, the data indicated that even though students in these four rural schools were similar, dissimilar opportunities for achievement and success existed at the schools. From a state policy perspective, questions about equity and legislative responsibility arise when we see similar types of students located in different schools in different parts of a state being provided with quite dissimilar opportunities for achievement and success.

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