

ELEMENTARY TEACHERS' PERCEPTIONS OF PRACTICES TO INCREASE THE  
ACADEMIC ACHIEVEMENT OF ECONOMICALLY DISADVANTAGED  
RURAL STUDENTS IN HIGH POVERTY SCHOOLS

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Title

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## ABSTRACT

Follman, Debra Kay, Ph.D., Department of Education, College of Human Development and Education, North Dakota State University, December 2010, Elementary Teachers' Perceptions of Practices to Increase the Academic Achievement of Economically Disadvantaged Rural Students in High Poverty Schools. Major Professor: Dr. Ronald Stammen.

Education is the key to breaking the cycle of poverty, beginning with children in their earliest years. The greatest challenge facing public education has been the education of all students to proficiency, with the most difficult aspect of this challenge as teaching the underachieving children of poverty. The enactment of No Child Left Behind, Public Law 107-110 (NCLB) has brought increased accountability standards for public schools to the forefront. Narrowing the achievement gap for poor and minority students has become a concentrated focus. It is necessary that elementary school teachers are knowledgeable of the instructional strategies, interventions, best practices, and environments to ensure that students who live in poverty learn and achieve acceptable standards of academic excellence and school success.

This study investigated the interventions implemented for increased student achievement in elementary schools in North Dakota with high-poverty enrollments. It was accomplished by examining the factors associated with lower academic achievement for children living in poverty. The study also explored the school-based practices that are perceived to help increase the academic achievement of children living in poverty.

This was a quantitative survey study with a target population of 29 elementary schools in North Dakota who are considered high-poverty. Survey data from 176 elementary teachers (69% response rate) indicated that both rural and urban schools participated in the study. The data were collected and analyzed to ascertain basic

descriptive statistics, t-test, and ANOVA analysis. The comments from each section of the survey were qualitatively coded, themed, and reported.

The conclusions were that the elementary schools in North Dakota, serving 40% or more students living in poverty who made Adequate Yearly Progress as determined by performance on the North Dakota State Assessment, are using a majority of the best practices reflected in the research about high high-performing, high-poverty schools. The data suggest that parenting skills and attendance issues were identified as having an effect on student achievement most often. The study revealed that there should be a concentrated effort towards parenting workshops for families living in poverty through the school and other community organizations.

The study also indicated that the teachers' highest level of agreement for increasing achievement was having high expectations for all students. Teachers reported that the use of assessments to monitor progress, to measure progress, and guide instruction were utilized to a high degree. Classroom management with rules and routines established, rapid pace of instruction, and a combination of negative and positive reinforcements were also identified as being used in high-achieving schools serving students living in poverty.

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## TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	v
LIST OF TABLES.....	ix
CHAPTER I. INTRODUCTION.....	1
Statement of the Problem.....	8
Purpose of the Study.....	8
Definition of Terms.....	9
Significance of the Study.....	10
Limitations of the Study.....	14
Organization of Remaining Chapters.....	14
CHAPTER II. REVIEW OF LITERATURE.....	16
Overview.....	16
Introduction.....	16
Levels of Poverty.....	17
Factors of Poverty Increasing the Risk of Lower Academic Achievement.....	22
Education Initiatives.....	38
Practices Increasing Student Achievement for High-Poverty Schools.....	41
Summary.....	60
CHAPTER III. METHODOLOGY AND PROCEDURES.....	62
Introduction and Research Design.....	62
Sample Population.....	63
Instrumentation.....	64

Validity and Reliability .....	65
Data Collection Procedures.....	66
Data Analysis Procedures .....	67
CHAPTER IV. ANALYSIS OF DATA .....	69
Introduction.....	69
Demographics .....	69
Factors Associated With Lower Academic Achievement .....	70
<i>Research Question 1</i> .....	70
Practices That Increase Student Achievement in High-Poverty Schools .....	73
<i>Research Question 2</i> .....	73
Qualitative Comments Summary .....	85
CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	88
Introduction.....	88
Purpose.....	88
Research Questions .....	88
Research Question One.....	89
<i>Summary</i> .....	89
<i>Conclusions</i> .....	90
<i>Recommendations</i> .....	92
Research Question Two .....	93
<i>Summary</i> .....	93
<i>Conclusions</i> .....	95
<i>Recommendations</i> .....	97

Recommendations for Further Study.....	98
REFERENCES.....	99
APPENDIX A. LITERARY FRAMEWORK. ....	120
APPENDIX B. SURVEY INSTRUMENT. ....	124
APPENDIX C. PANEL OF SIX EXPERTS.....	127
APPENDIX D. PERMISSION FROM IRB. ....	128
APPENDIX E. CONSENT LETTER TO PRINCIPALS.....	129
APPENDIX F. CONSENT LETTER TO TEACHERS .....	130
APPENDIX G. BEST PRACTICES DATA BY DEMOGRAPHICS .....	131



## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Differences Between Poverty Threshold and Poverty Guidelines.....	20
2. Research Questions, Survey Questions, and Scales of Measurement.....	67
3. School District Size, Years of Teaching at the Present School, and Professional Development .....	70
4. Factors Affecting Achievement of Students .....	72
5. High Expectations .....	74
6. Leadership .....	75
7. Assessment.....	76
8. Effective Teachers.....	77
9. Guaranteed and Viable Curriculum .....	78
10. Collaborative School Environment.....	79
11. Professional Development .....	80
12. Parental Involvement .....	82
13. Classroom Management.....	83
14. Additional Instructional Time.....	84

## CHAPTER I.

### INTRODUCTION

Americans have always been concerned about poor and disadvantaged children, yet the manner in which people have attempted to help them in regards to education has varied considerably (Vinovskis, 1992). Education for the poor frequently began as private, charitable efforts in the early 19<sup>th</sup> century, but eventually received public funding. Statewide common-school systems were created to increase opportunities for all children and to create common bonds among an increasingly diverse population. Reformers argued that education could preserve social stability as well as prevent crime and poverty. Yet school was a voluntary and incidental institution with various attendance rates, depending on the need for labor at home or the pressures of poverty, which forced children into the job market at an early age to help support the family income (Thernstrom, 1981). For most working-class families, attending school after the age of 10 or 11 was simply not a viable option because of the need to contribute to the household income.

In the early 1800s, about 2,000,000 school-age children were working 50- to 70-hour weeks in factories. Most of these children (many age 12 and under) came from poor families who could not afford to take care of them. Church and labor groups, teachers, and many other people were outraged by such cruelty. They began to press for reforms and in 1938, the Fair Labors Standards Act was passed by Congress, which fixed minimum ages of 16 for work during school hours. Factory owners found it more difficult to exploit the cheap and plentiful child labor when children were required to attend school for a number of years (Hindman, 2002). Compulsory education laws were enacted, beginning with

Massachusetts in 1852, for reasons of illiteracy and child labor (Butts, 1978). Supporters of these laws believed that the public school was the best means to improve the literacy rate of the poor and to help assimilate an immigrant population that grew at a high rate between the mid nineteenth to the early twentieth centuries.

The Free School Act of 1834 sparked the development of rural, one-room schools, which provided brief terms, perhaps six weeks in the winter, and another six weeks in summer. These schools were attended mainly by young children who were not working in the fields. Schooling was dependent upon agricultural work; therefore, resources for schools were meager. Thernstrom (1981) found that schools would be free for a set amount of time and parents would pay rate bills for continuation school. Thus, the amount of schooling a child received was determined by wealth.

Bowles and Gintis (1976) argued that, even though public schooling was to include all children, it was simply a reproduction of the existing capitalist structure, which excluded children of working-class families. Those few children who did enter the system experienced discrimination. African American children were the most disadvantaged as they faced strong racial prejudices and, therefore, did not receive equal access to schooling. In 1900, only 10% of American adolescents aged 14 to 17 were enrolled in high schools. Most of these students were from affluent families.

With the arrival of adult immigrants, who displaced older children in the workforce, high school enrollment grew with about half of all adolescents attending high school by 1930. The Great Depression further eliminated jobs and by the 1950s, there were higher expectations for everyone to graduate. The Civil Rights movement and Great Society

reforms of the 1960s placed federal monies into elementary and high schools to try to improve the academic success of underprivileged children (Reese, 2005).

Well-intentioned school reforms and diligent efforts to increase the achievement of children in poverty through the decades have occurred, yet the more affluent children continue to outperform their economically disadvantaged peers. While the gap in achievement between poor students and less disadvantaged students narrowed considerably through the late 1980s, progress since then has been marginal, and the lack of achievement of poor and minority students remains one of the most pressing problems in education (Weiss, 2003).

The opportunities for a free public education improved through the years, yet the education of children living in poverty has continued to be a concern for educators and policy makers throughout the country. Nearly 13 million American children, approximately 17%, live in families with incomes below the federal poverty level, which, in 2007, was determined as \$20,650 a year for a family of four. After a decade of decline, the proportion of children living in poverty families is raising again, a trend that began in 2000. There are 1.2 million more children living in poverty today, an increase of 11% since 2000 (U.S. Census Bureau, 2009). Research consistently shows that, on average, families need an income of about twice the federal poverty level to make ends meet.

The socioeconomic status (SES) of a child is most commonly determined by combining parents' educational level, occupational status, and income level (Jeynes, 2002). Since at least the mid-1960s, the importance of a child's family socioeconomic status as an influence on academic achievement has been examined (Coleman, 1966). Studies have consistently shown that poor children, on average, perform significantly less well than

nonpoor and middle-class children on numerous indicators of academic achievement, including achievement test scores, grade retention, course failures, placement in special education, high school graduation rate, high school dropout rate, and completed years of schooling (Conger & Elder, 1994; Entwisle, Alexander, & Olson, 1997).

Growing up in poverty does not necessarily determine the level of academic success, yet there is no doubt it presents many challenges for children in the academic arena (Payne, 2001). Many low-income children begin school with skill deficits and face failure experiences at school entry. Research by Hart and Risley (1995) found that poor children typically begin school with weak language skills, non-existent writing skills, poor listening skills, and limited vocabulary. Additionally, poor children have limited financial and emotional resources, inadequate housing, inferior health care, and chronically stressful lifestyles that reduce their ability to give full attention to learning (Payne, 2001).

Studies that have compared the school environments of poor and nonpoor children have reported differences in classroom instruction that are known to contribute differentially to achievement and school success. Children in poverty tend to be schooled in low-performing schools and taught by ill-equipped teachers (Murnane, 2007). Teachers in some low-socioeconomic schools, compared to a higher SES school, provide less daily time devoted to instruction in basic academic skills, such as reading (Greenwood, 1991), and use materials and instructional equipment in ways that actually reduce students' engagement with the instructional task (Cooper & Speece, 1990). Whether viewed as a problem of instructional quality or an adaptation of the school to children with lower academic skills at school entry, or their combination, when accumulated over an entire school year, these differences translate to months of difference in the total educational

experience of students in a low SES school, differences significantly correlated with lower trajectories of academic achievement (Greenwood, Hart, Walker, & Risley, 1994).

Consequently, many students leave school without the skills needed to earn a decent living in a rapidly changing economy.

Barr and Parrett (2007) maintain that the best way to predict who will live in poverty and who will enjoy the benefits of the middle class is education. With more jobs requiring a high school education and postsecondary training programs, there is little hope of leaving a life of poverty without a strong educational background. The American military has also made education a determining factor, where many of the branches will no longer accept young recruits with only a GED. Business, industry, and the armed forces have few opportunities for those with lower academic skills or dropouts, often the result of low academic achievement throughout the early and middle grades.

Well-intentioned school reforms and diligent efforts to increase the achievement of children in poverty through the decades have occurred, yet the more affluent children continue to outperform their economically disadvantaged peers. While the gap in achievement between poor students and less disadvantaged students narrowed considerably through the late 1980s, progress was marginal, and the lack of achievement of poor and minority students remained one of the most pressing problems in education (Weiss, 2003).

National recognition of this crisis in public education resulted in federal legislation for universal, mandated improvements in achievement. On January 8, 2002, President George W. Bush signed landmark education reform legislation called the No Child Left Behind Act of 2001 (NCLB) into law; the law was designed to improve student achievement and close achievement gaps (U.S. Department of Education, 2004). This

legislation requires a universal standard for achievement with reprehensive sanctions applied to schools failing to meet a state's adequate yearly progress (AYP) goals, with the goal of 100% proficiency by the year 2014. Districts serving these children must report annual progress for every group or face sanctions for inadequate yearly progress. Sanctions include loss of Title I funding; required diversion of funds for individual tutors or school transfers; and, in the worst case, termination of administration and teaching staff at underperforming schools.

To target the accountability mandates for groups of children most vulnerable to school failure, NCLB requires districts to disaggregate assessment results and to be held accountable for student subgroup performance by race, language proficiency, socioeconomic status, and special education disability. In order for a school to make AYP, a required percentage of students must attain scores that are "proficient" on the statewide assessments. Another measure that is used is student participation. Ninety-five percent of students must take each assessment in order to meet proficiency. In addition, schools must meet targets for graduation rate and school attendance ratios. All of the standards must be met by all students, and measured as a whole and by each subgroup. If just one subgroup does not make proficiency, the entire school does not make AYP (North Dakota Department of Public Instruction, 2008).

The number of high poverty schools (where 76-100% of the students live in poverty) continues to increase, with over 16,000 public schools in the United States, or 17 percent, specified as high-poverty in 2008, and in 2000, some 12 percent of our public schools fit this description. The National Assessment of Educational Progress (NAEP) data indicates the average reading scores increased 4 points for both 4th-graders and 8th-

graders. Since 1990, in the area of math, scores for 4th-graders have increased by 27 points. For 8th-graders, the average score in math has increased by 20 points (U.S. Department of Education, National Center for Education Statistics, 2010).

Research from state exams has indicated that student performance has risen also, yet test score gaps between student groups remain large and will take many years to close at current rates, even in the states making the most progress. Data on schools in the nation making AYP from 2005-2009 indicated that there was an increase in the percentage not making AYP, from 29% to 33% (Usher, 2010). Although Arne Duncan, U. S. Secretary of Education, proposes changes to No Child Left Behind, he emphasizes that states must adopt core standards and improving teacher quality as a means to accelerate learning and close achievement gaps nationwide. A national challenge to reshape America's educational system was issued by President Obama in 2009. Race to the Top is a comprehensive vision for school reform supported by a \$4.35 billion investment (U. S. Department of Education, 2010).

While the cycle of underachievement continues to persist in some schools, reports indicate there are schools across the nation that have been successful in providing effective classroom instruction and support that has closed the gap. There are public schools in poor communities that have made progress or have excelled in their goals of teaching children to read, do mathematics, and develop higher-order thinking skills. Researchers have begun to document the attributes of successful schools serving high-poverty populations. A combination of instructional practices, attitudes, environments, and policies have been identified as these schools have engaged in systemic change for increasing the achievement of disadvantaged students. By closely examining the practices of the most successful



schools that provide education to poverty-based, disadvantaged students, models can be created for other schools and districts to employ (Edmunds, 1979; Lezotte & McKee, 2007).

### Statement of the Problem

Education is the key to breaking the cycle of poverty, beginning with children in their earliest years. The enactment of No Child Left Behind, Public Law 107-110 (NCLB) brought the increased accountability standards for public schools to the forefront and narrowing the achievement gap for poor and minority students has become a concentrated focus. Elementary school teachers must be knowledgeable and understand the instructional practices, attitudes, environments, and policies to ensure that students who live in poverty learn and achieve acceptable standards of academic excellence and school success. A growing number of high-poverty, low-performing schools have become high-performing schools according to NCLB standards. By employing research and identifying how these schools have transformed student learning, other educators will be able to put this knowledge into action so that no child will be left behind.

### Purpose of the Study

The purpose of this study was to investigate the interventions implemented for increased student achievement in elementary schools with high-poverty enrollments. The research questions guiding this study are as follows:

1. What factors are associated with lower academic achievement for children living in poverty?
2. What school-based practices were perceived to help increase the academic achievement of children living in poverty?

## Definition of Terms

For the purposes of this study, the following definitions were utilized.

Achievement Gap: Refers to the differences in levels of achievement among groups of students (such as Asian, African American, Hispanic, White, students with disabilities, and students living in poverty). It also can refer to the difference between the performance of each student group and the standards. The reason for this distinction is that the goal is not to have every student group achieving at the same level, but to have every student group meeting the same high standards or expectations. For many years, low-income and minority children have been falling behind their White peers in terms of academic achievement (Williams, 2003).

Adequate Yearly Progress: Measurement that allows the U.S. Department of Education to determine how every public school and school district in the county is performing academically according to results on a standardized test. Schools meet AYP by having all the identified AYP student groups—including American Indian, African American, Asian, Hispanic, White, English Language Learners (ELL), students with disabilities (receiving special education services), and students living in poverty—meet the determined standards each year. Additional requirements for the district and increasing sanctions for the school occur if there is failure to make AYP over multiple years (Chenoweth, 2008).

Low-income: A household income at or below the Department of Health and Human Services poverty guidelines for a family of four. Families with income between 130 and 185% of the poverty threshold established by the U.S. Census Bureau are considered low-income. Children from these families are eligible for reduced-priced lunch and breakfast in the National School Lunch Program (U.S. Census Bureau, 2009b).

Poverty -A household income below the Department of Health and Human Services poverty guidelines for a family of four. Children from families with income at or below 130% of the poverty threshold established by the U.S. Census Bureau are considered to be living in poverty. Children from these families qualify for free lunch and breakfast in the National School Lunch Program (U.S. Census Bureau, 2009).

Socioeconomic status: An individual's, family's, or group's ranking on a hierarchy according to its access to or control over some combination of valued commodities such as wealth, power, and social status (Mueller & Parcel, 1981)

#### Significance of the Study

Poverty has fluctuated from a high of 22% in 1960 to a low of 11.1% in 1973. According to the National Center for Children in Poverty, since 2000, the number of children living in poverty has risen to 18%, nationally, and up to 29% in the Midwest, which indicates that this problem continues to be serious in our country today (Douglas-Hall & Koball, 2006). Poverty sets the stage for students' academic performance and significantly impacts children's academic achievement. Economically disadvantaged students are more likely to enter school with skill deficits and face failure experiences at school entry. Studies have shown that, by fifth grade, low-income students make less progress than their more affluent peers whom they matched on third-grade achievement (Harrington, 1997).

Longitudinal data from the National Assessment of Educational Progress (NAEP) show that gaps already appear in reading and mathematics for grade 4, suggesting that once achievement gaps between students' groups emerge, they tend to persist over time (Davison, Seok Seo, Davenport, Butterbaugh, & Davison, 2004). Lower achievement gaps

for these students will affect their preparation for advanced secondary content, their success in high school, and even their ability and perseverance to graduate from high school.

Many poor children who do not experience academic success in school drop out before they acquire the education to become productive, contributing members of society. Schmoker (2006) reported that only 68% of students, rather than the presumed 85%, graduate from high school and that just over half of low-income students graduate. Alexander, Entwisle, and Kabbani (2001) found that students of lower socioeconomic status had a dropout rate four times higher than that of students with a higher socioeconomic status. Only 7% of low-income students will earn a college degree during a time when a college education is the ticket to success. With more jobs requiring a high school education and postsecondary training programs, business and industry have no opportunities for dropouts. Few of the armed forces branches will accept young recruits who only have a GED. Students who do not obtain a high school diploma earn significantly less in wages (Blankstein, 2004; Springfield, 1995). It was reported that the income level of those who have not graduated from high school is slightly above the poverty level in the United States (U.S. Census Bureau, 2003). Woods (1995) also argues that students without a high school diploma have greater rates of incarceration and drug abuse than students who graduate from high school. In today's society, they are more likely to be underemployed, work for a minimum wage, hold two or three part-time jobs, or be unemployed. Many of these adults fall into depression and become victims to drug and alcohol abuse, dysfunctional family life, and socially unacceptable behavior. A large number become involved in crime with the result being prison. The United States has doubled its number of

men and women in prison in the past 20 years. Over 80% of prison inmates have been dropouts, and 50% or more are illiterate (Reimer & Smink, 2005). Without sufficient education, students who do not graduate from high school likely condemn themselves to a life of poverty.

The No Child Left Behind accountability provision mandates that all children reach proficiency based on the standards set forth by each state's assessment by 2014. Failure is not an option for schools. Providing a high-quality school system for all students, regardless of socioeconomic status, serves as the gateway to, and potential equalizer, for economic and life success for millions of under-served children (Blankstein, 2004). Identifying the common factors that have guided schools for increased achievement of economically disadvantaged students is timely and logical.

Educators appear to be responding carefully, and with a sense of urgency, to the requirements of No Child Left Behind. However, North Dakota schools are posed with unique challenges in raising student achievement for disadvantaged students. The small, rural farming communities located remotely from one another do not have access to school choice, which has been identified as an option for students in schools that have not made adequate yearly progress. Another provision of NCLB is the opportunity to obtain supplemental education services for students from a low-income family attending a school that did not make AYP. Supplemental services are comprised of additional academic instruction designed to increase the academic achievement of students in schools identified for improvement. Supplemental services must be provided outside the regular school day and focused specifically on increasing the academic achievement of students. In North Dakota, there are very few supplemental service providers. Most are not within a

reasonable traveling distance for low-income, low-performing students. Those providers that offer an online service pose issues of computer availability and internet access for families in poverty. With few opportunities for supplemental services available to schools, it has become the sole responsibility of the schools and the educators to increase the student achievement of those students scoring below the level of proficiency on the state assessments.

Poverty in rural states is often invisible to policymakers and even the remainder of society in the same community (Shipler, 2005). Houses far from town or the temporary quarters of migrant farm workers in a car that doubles as a home keep the effects of poverty invisible. Economic shifts and public policy changes have the most impact. One retailer or plant closing or one line in the Farm Bill changed can mean negative consequences for a large number of people in a small community. Rural schools face resource constraints because of depressed local tax bases, declining infrastructures, and Title I formula allocations. Because of rural remoteness, teachers may lack access to professional development and educational opportunities that would help them to acquire knowledge about best practices for teaching children living in poverty. Teacher shortages are especially severe in high-poverty rural areas, making it even more challenging to find highly qualified teachers (Lockette, 2010).

Schools must learn more about the instructional practices, attitudes, environments, and policies that are essential to raising student achievement for poor students to make well-informed decisions about school-wide initiatives and allocating resources. Higher education leaders need to learn more about best instructional practices as they develop teacher and school administration preparation programs. State and local policymakers need

to know more about what makes a difference for children in poverty as they allocate funds for social and educational reforms. It is imperative that educators learn as much as possible about increasing the achievement of socioeconomically disadvantaged students so that “no child is left behind.”

### Limitations of the Study

Due to the nature of this study, participants were elementary teachers who worked in schools with 40% or more of poverty and those that had made AYP in the past school year. This limited the generalization of the findings to other states in the nation.

This study was also limited in its scope due to the use of convenience sample, rather than a random sample. Creswell (2005) states that convenience sampling is used when the participants are available and willing to be studied. By limiting the study to educators in 29 elementary schools in North Dakota that had poverty levels of 40% or more and made AYP in the past year, it was possible that teachers who are not currently working in schools with significant poverty levels would bring a different perspective to this study.

The survey for this study was developed with a survey designed by the Vermont Department of Education as a resource. There was no indication of psychometrics for the Vermont survey and because there was no pilot study completed for the survey developed for this study, a test for reliability was not conducted, which could be another limitation of the study. Survey items were reviewed by a panel of experts for strengthening validity of the survey.

### Organization of Remaining Chapters

There are five chapters in this study. Chapter I provides an Introduction, which includes an overview and background of the study. Also included is the Statement of the

Problem, Purpose of the Study, Definition of Terms, Significance of the Study, and the Organization of Remaining Chapters. In Chapter II, a review of the related literature is presented. The literature review begins by reviewing how poverty is measured, the effects of poverty on student achievement, and education initiatives established by the federal government. It also includes best practices and strategies consistently identified for high-poverty schools achieving gains in student achievement. Chapter III describes the Methodology and Procedures. It includes an Introduction and Research Design, Sample Population, Instrumentation, Validity and Reliability, Data Collection Procedures, and Data Analysis Procedures. Presented in Chapter IV are an Introduction, Demographics, and a summary of the findings. Chapter V provides a summary of the study, conclusions, and recommendations for further study.



## CHAPTER II.

### REVIEW OF LITERATURE

#### Overview

The purpose of this chapter was to provide an overview of the literature as it was related to how poverty is measured in the United States, how factors of poverty affect the achievement of children, the education initiatives established by the federal government, and common practices and strategies of high-poverty schools that have achieved gains in student achievement. The Review of Literature was completed by examining current research for the above areas; attendance at the National 2009 Title I Conference in San Antonio, Texas; as well as attending a day-long presentation by William Parrett, educator, internationally known speaker, and author of books on topics regarding efforts to help youth at risk and school improvement. This conference focused on current practices and strategies in schools serving students living in poverty in the United States

#### Introduction

Poverty is typically defined in terms of pretax income insufficient to cover the minimal needs of families. There is an absence of the exact conditions that families require to be successful, including a stable environment, security, emotionally positive time together, a strong shared belief system, justice, and access to basic resources (Kaiser & Delaney, 1996). Low levels of education and job training, habitation in economically deprived neighborhoods, and relatively few positive family experiences define the poorest of families.

## Levels of Poverty

There are two versions of the federal poverty measure: the poverty thresholds and the poverty guidelines. The U. S. Census Bureau issues the poverty thresholds, which are generally used for statistical purposes, for example, to estimate the number of people in poverty nationwide each year and to classify them by type of residence; race; and other social, economic, and demographic characteristics. All official poverty population figures, (counting the nation's low-income population), are calculated using the poverty thresholds, not the guidelines. The United States determines the official poverty rate and calculates the poverty guidelines using poverty thresholds that are issued each year by the Census Bureau (U.S. Census Bureau, 2009b)

The poverty guidelines are the other version of the federal poverty measure and they are issued each year in The Federal Register by the Department of Health and Human Services. These guidelines are a simplification of the poverty thresholds and are used for administrative purposes, such as determining whether a person or family is eligible for assistance through various federal programs. Programs using the guidelines in determining eligibility include Head Start, the Food Stamp Program, the National School Lunch Program, the Low-Income Home Energy Assistance Program, and the Children's Health Insurance Program. Low income and poverty have different distinctions within the guidelines. People living in families with incomes below the official poverty guidelines are considered to be living in poverty. Those in families with incomes from the poverty line to 185 percent above the poverty line are considered to be living on low incomes. People who meet the technical measure of poverty and those who earn a little more income live similar lives. They struggle with meeting their basic needs, can be food-insecure, and have trouble

saving for and coping with financial crises. A family in poverty may qualify for more assistance than people who earn low incomes. The official poverty guidelines for 2009 stated that an annual income of \$22,050 for a family of four lived at the poverty line. An annual income of \$44,100 for that family of four would be considered low-income (U.S. Department of Health and Human Services, 2009).

During the State of the Union Address on January 8, 1964, President Lyndon Johnson introduced the War on Poverty legislation, which was a response to the difficult economic conditions, associated with a national rate of around 19% (Lichter, 1997). The Johnson administration chose an absolute measure to define poverty. The “absolute poverty line” was the threshold below which families or individuals are considered to be lacking the resources to meet the basic needs for healthy living, having insufficient income to provide the food, shelter, and clothing to preserve health.

An economist working for the Social Security Administration, Mollie Orshansky, published an article later in 1964 that formed the basis for the current measure of poverty in the United States. The “Orshansky Poverty Thresholds” took the dollar costs of the United States Departments of Agriculture’s economy plan for families of three or more persons and multiplied the costs by a factor of three (U.S. Department of Health and Human Services, 2008). This factor of three was used because the Agriculture Department’s 1955 Household Food Consumption Survey found that, for families of three or more persons, the average dollar value of all food used during a week (both at home and away from home) accounted for about one-third of their total money income after taxes. In 1965, the United States Office of Economic Opportunity adopted Orshansky’s poverty thresholds as a working definition of poverty. In 1969, the United States Bureau of Budget (now called the

Office of Management and Budget), designed the poverty thresholds with certain revisions as the federal government's official statistical definition of poverty. The thresholds are adjusted each year for inflation using the Consumer Price Index (National Poverty Center, n.d.).

The poverty guidelines are occasionally referred to as the "federal poverty level" (FPL), but that phrase is unclear and in cases where accuracy is essential, such as legislative or administrative, it should not be used. The poverty guidelines, unlike the poverty thresholds, are designated by the year in which they are issued. The guidelines issued in January 2008 are designated the 2008 poverty guidelines. Those 2008 poverty guidelines only reflect price changes through the calendar year 2007 and are approximately equal to the Census Bureau poverty thresholds calendar year 2007. The poverty guidelines apply to both aged and non-aged units, and have never had an aged/non-aged distinction. The Census Bureau (statistical poverty) thresholds have separate figures for aged and non-aged one-person and two-person units (University of Madison-Wisconsin, Institute for Research on Poverty, 2004). Research consistently shows that, on average, families need an income of about twice the federal poverty level to make ends meet (Wight, Chau, & Aratani, 2010). As shown in Table 1, there are key differences between the poverty thresholds and the poverty guidelines.

According to the U. S. Census Bureau (2009), in the past 50 years, the poverty rate has varied. In the late 1950s, the poverty rate for all Americans was 22.4%, or 39.5 million individuals. The numbers declined steadily throughout the 1960s, reaching a low of 11.1%, or 22.9 million individuals, in 1973. Over the next decade, the poverty rate fluctuated between 11.1% and 12.6%, but it began to rise steadily again in 1980. By 1983, the

Table 1. Differences Between Poverty Thresholds and Poverty Guidelines

	Poverty Thresholds	Poverty Guidelines
Issuing Agency	Census Bureau	Department of Health and Human Services
Purpose/Use	Statistical: calculating the number of people in poverty	Administrative: determining financial eligibility for certain programs
Characteristics by Which They Vary	Detailed (48-cell) matrix of thresholds varies by family size; number of children; and, for 1- & 2-person units, whether elderly. Weighted average thresholds vary by family size and, for 1- and 2-person units, whether or not elderly. There is no geographic variation; the same figures are used for all 50 states and D.C.	Guidelines vary by family size. In addition, there is one set of figures for the 48 contiguous states and D.C., one set for Alaska, and one set for Hawaii.
Timing of Annual Update	The Census Bureau issues preliminary poverty thresholds in January and final poverty thresholds in August of the year after the year for which poverty is measured. The poverty thresholds are adjusted to the price level of the year for which poverty is measured. For example, the poverty thresholds for the calendar year 2008 were issued in 2007 (preliminary in January, final in September), were used to measure poverty for calendar year 2008, and reflect the price level of calendar year 2008.	HHS issues poverty guidelines in late January or early February of each year. Some programs make them effective the date of publication, others at a later date. For example, the 2008 poverty guidelines were issued in February 2008, calculated from the calendar year 2006 thresholds issued in September 2007, and updated to reflect the price level of calendar year 2007. Therefore, the 2008 poverty guidelines are approximately equal to the poverty thresholds for 2007 (for most family sizes).
How Updated or Calculated	The 48-cell matrix is updated each year from the 1978 threshold matrix using the Consumer Price Index for all Urban Consumers (CPI-U). The preliminary weighted average thresholds are updated from the previous year's final weighted average thresholds using the CPI-U. The final weighted average thresholds are calculated from the current year's 48-cell matrix using family weighting figures from the Current Population Survey's Annual Social and Economic Supplement.	Guidelines are updated from the latest published (final) weighted average poverty thresholds using the CPI-U. Figures are rounded, and differences between adjacent-family-size figures are equalized.
Rounding	Rounded to the nearest dollar	Rounded to various multiples of \$10: may end only in zero
2008 Figures—Family of Four	\$22,017	\$21,200
2009 Figures—Family of Four	\$22,171	\$22,050

(United States Department of Health and Human Services, 2008, 2009)  
(U.S. Census Bureau, 2008, 2009)

number of poor individuals had risen to 35.3 million individuals, or 15.2%. For the next 10 years, the poverty rate remained above 12.8% and the Center of Budget and Policy Priorities reported that, in 1994, the number of poor Americans hit its highest level (14.3%) in 10 years, with the increase particularly sharp among children (Harrington, 1997). The rate declined for the remainder of the decade, to 11.3% by 2000, which was a 26-year low. It then increased for four consecutive years to 12.7% in 2004 and then declined to 12.3% in 2006. There was an increase of 5.4 million poor from 2000 to 2006, while the total population grew by 17.5 million. The poverty rate in the United States climbed to a high of 14.3% in 2009 when millions of workers lost their jobs in the longest and deepest U.S. economic slump since the Great Depression (Chapman, 2009).

The poverty rate for children has historically been somewhat higher than the overall poverty rate. Bernstein, Brocht, and Spade-Aguilar (2006) reported that the United States had the highest rate of childhood poverty among major industrialized nations. While it had rates of child poverty in the 20% range, countries such as Germany, Sweden, and the Netherlands had rates of approximately 4.9%, 3.5%, 4%, respectively. The child poverty rate in 1993 was 22%, the highest rate since 1964. It then fell during the late 1990s to about 16% in 1999, where it remained through 2002. In 2003, estimates indicated a small, but statistically significant, increase in child poverty to 17.6%. Child poverty in 2009 indicated a 23.8% rate for children age 18 and below. Children comprised only 23.5% of the U.S. population, yet they accounted for 24.5% of all poor persons (Mattingly & Stransky, 2009).

While poverty in the United States is primarily thought of as an urban problem, data from the U.S. Census Bureau indicates that most of the counties with high child poverty rates are located in rural America (O'Hare & Mather, 2008). Of the 100 counties with the

highest child poverty rates in 2008, ninety-five were rural counties. Those 100 counties had child poverty rates above 40%, more than twice the national rate of 18.5% in 2008 (U.S. Census Bureau, 2009a).

The poverty rate in the state of North Dakota slightly fluctuated in the past ten years with 13% living in poverty in 2009. While this rate is lower than the national average, the highest rates of poverty occur on the Native American Reservations on both the northern and southern sides the state. Poverty rates on the reservations in Sioux, Benson, and Rolette Counties average 1 in 4 persons living in poverty, ranging from 22% to 28%. Children under the age of 5 years were identified as the highest percent living in poverty with 19.6% in 2009 (Annie E. Casey Foundation, 2009).

#### Factors of Poverty Increasing the Risk of Lower Academic Achievement

There are a number of factors regarding children living in poverty found to increase the risk of lower academic achievement. Compared with middle- and-high income children, low-income children are disproportionately exposed to conditions that adversely affect children's healthy development, which affects academic achievement in school. A number of studies found that family income and poverty status were significant predictors of IQ scores in five-year-olds, even after accounting for maternal education, family structure, ethnicity, and other differences between low- and high-income families (Duncan, Brooks-Gunn, & Klebanov, 1994). A study over a four-year period by Smith, Brooks-Gunn, & Klebanov (1997) confirmed the negative effects of economic disadvantage on children's cognitive development. Their study showed that family income was associated with significantly reduced IQ scores of five-year-old children throughout different settings in the United States. Supporting their findings were data from another study conducted by

Conger and Elder (1994) with older middle school students, which found that economic advantage facilitated cognitive abilities as identified by improved school performance, whereas economic disadvantage impaired intellectual functioning. Research by Greene & Forster (2004) identified factors that had a documented relationship to student achievement and placed students at risk of failing in school. They referred to these factors as benchmarks of “teachability”, contending that the more factors a particular student had, the more confounding the challenges of effective teaching and learning.

Children born in poverty begin life at higher risk for health and developmental problems due to poor pre- and perinatal health care, their own health status at birth, and the health status of their mothers (Kaiser & Delaney, 1996). Lack of early first-trimester prenatal care is associated with a reduction of birth weight (Frank, Strobino, Salkever, & Jackson, 1992). Long-term effects of low birth weight, found through middle childhood and adolescence, include grade failure, lower school achievement, behavior problems, and receipt of special education services (Duncan & Brooks-Gunn, 1997). The health of infants born in poverty is also hampered by higher rates of prenatal exposure to drugs, both legal and illegal. Hawley and Disney (1992) concluded that perinatal complications, such as reductions in birth weight, head circumference, and length of gestation, are increased due to this exposure. All of these complications are risk factors for cognitive development. Studies by Litt, Taylor, Klein, & Hack (2005) suggest that children with extremely low birthweight are at higher risk for LD and cognitive deficiencies than their term-born peers. One study examined the relationship between family income and low birth weight found that among whites, women with family below the federal poverty in the year of birth were



80% more likely to have a low birth rate baby as compared with women whose family incomes were above the poverty level (Brooks-Gunn & Duncan, 1997).

Children in low-income families are more prone to health issues such as asthma, resulting in more sleeplessness, irritability, and lack of exercise. In research by Books (2000), nearly half of a classroom of 30 children in a high-poverty school in the South Bronx had a diagnosis of asthma. Breathing pumps were needed on a daily basis for eight of the students. The National Institutes of Health (1996) reported that 10 million days of school are missed in a year, with many individual children missing 20-40 school days every year. Because of less medical attention, children in low-income families, compared to their middle-class counterparts, miss a lot more school because of asthma and, thus, learn less.

Other poverty-related health factors contributing to the difference in IQ between poor and nonpoor children were anemia and otitis media, a childhood ear infection. In a number of studies, reoccurring otitis media in the first 3 years of life has been related to hearing impairments and, thus, to language development, which leads to reading problems in school. Poor children have more untreated cases of otitis media than do those who are financially better off, especially those with medical insurance (Berliner, 2005). Its prevalence and lack of treatment in children is quite clearly affected by poverty. The findings of a 1990 analysis by Goldstein (1990) suggest that the cumulative health disadvantage experienced by poor children has accounted for as much as 13% to 20% of the difference in IQ between poor and nonpoor four-year-olds during the 1970s and 1980s. Furthermore, families in poverty are more likely to have no health insurance and, therefore, no routine preventive medical and dental care.

Poor children, especially those living in inner-city areas, have been reported to contain higher levels of lead in their blood than do nonpoor children, which is due to higher rates of residence in older housing (before 1964) that contains lead paint and lead-soldered pipes (Crooks, 1995). Studies have found that exposure to lead can have a wide range of effects on a child's development and behavior. Even when exposed to small amounts of lead levels, harmful effects, such as premature births, smaller babies, decreased mental ability in babies, learning difficulties, and reduced growth in young children, have been found (Needleman, Schell, Bellinger, Leviton, & Allred, 1990). Studies by Needleman (1990) suggest that exposure to lead increases the risk for poorer reading scores, clumsiness, evidence of depression, lower high school graduation rates, increased rates of hard drug use, and the risk of attention deficit disorder (ADD). At high levels, lead can cause permanent brain damage and even death.

Children in poor families for longer duration have been found to be of poor nutritional status, as measured by low height-for-age and low weight-for-height (Korenman & Miller, 1997). Lower caloric intake; vitamin and mineral deficiencies; and physical indicators of undernutrition, such as comparisons to national standards of height-for-age, weight-for-height, and rate of weight gain, are also found more frequently among poor children (Miller & Korenman, 1994). Numerous studies (Center on Hunger, Poverty, and Nutrition Policy, 1995) demonstrate that malnutrition, even with no clinical signs, affects intelligence and academic performance. Even moderate undernutrition can have lasting effects and can compromise cognitive development and school performance.

The increase in the number of single parents, both those who have children outside of marriage and those who experience divorce, is an important cause of the rise in the

number of poor children. Entwisle and Alexander (1996) found that mothers in two-parent families have higher expectations in terms of school achievement for their children than mothers in one-parent families. These high expectations can be realized as research has shown that children in one-parent families tend to receive lower marks than children of two-parent families.

The ability to parent is weakened by living in the conditions of poverty. There is less capacity for supportive, consistent parenting (Sampson & Laub, 1994). Patterns of lowered responsiveness, less warmth, and positive affect have been observed to continue throughout the preschool and early school years (Harnish, Dodge, & Valente, 1995). There are more often child-rearing patterns that are associated with stricter and harsher discipline (Evans, 2004). Families in poverty were two times more likely to rely on corporal punishment, rather than responsive, child-centered parenting practices (Fontes, 2005). Physical punishment is associated with increased child aggression, antisocial behavior, lower intellectual achievement, poorer quality of parent-child relationships, mental health problems (such as depression), and diminished moral internalization (Gershoff, 2008). The lack of parenting skills contributes to lower achievement among students in poverty.

Children from low-income families are at a greater risk for neglect and physical abuse than children not living in poverty. The physical abuse of children occurs more often in poor families, as effective parenting suffers in economically stressed environments (Conger & Elder, 1994). Research has consistently found that child abuse and neglect (maltreatment) increases the risk of lower academic achievement and problematic school performance. Results of a study by Kendall-Tackett and Eckenrode (1996) revealed that neglected children did perform more poorly than their non-maltreated counterparts, having

lower grades, more suspensions, more disciplinary referrals, and more grade repetitions. Neglect alone and neglect in combination with physical or sexual abuse were related to lower grades and more suspensions. The combination of abuse and neglect had a particularly strong effect on the number of disciplinary referrals and grade repetitions.

Less vocal stimulation is provided to infants of mothers who are poor (Oller, Eilers, Steffens, Lynch, & Urbano, 1994). A study by Hart and Risley (1995) suggested that readiness often begins in the home when the young child begins talking with parents, siblings, other relatives, and friends. The conclusion from this study indicated that three-year-olds in professional families had a vocabulary as large as that of the parents in the study who were on welfare. According to Davison et al. (2004), children from lower income families have smaller vocabularies because of less use or because of exposure to less complex language, such as rich nouns, modifiers, verbs, past-tense verbs, and clauses. Barr and Parrett (2007) reported that parents in professional occupations talked to their children using almost 2,200 words per hour. Blue-collar parents spoke about 1,300 words per hour, and welfare parents spoke only 600 words per hour to their children. These children also added words to their vocabulary at a slower rate, which translates into differences in reading readiness and possibly readiness for various types of subject matter as well. This lack of communication with adults severely affects the children of poverty because they arrive at school with significantly fewer communication skills than their more advantaged peers. In addition, poor children are, in general, not read to aloud as often, which contributes to vocabulary development (Rothstein, 2008).

Children of low-income families have substantially less cognitive stimulation and enrichment than children in higher-income families. Home learning resources, such as age-

appropriate toys and books, were less often available in homes of children living below the poverty level. Fewer supportive parental behaviors, such as encouragement to learn the alphabet, were noted in studies by Duncan and Brooks-Gunn (1997). A nationwide study of kindergarten children by Coley (2002) found that only 36% of parents from low-income families read to their children on a daily basis compared to 62% of parents from higher-income families. Similar findings were identified by the Federal Interagency Forum on Child and Family Statistics (2000) in a study of preschoolers age 3-5, which found that parents of higher income not only read to their children on a daily basis substantially more often, but 22% also indicated that they had made at least one visit to the library in the past month compared with 58% of the families above the poverty level going to the library.

Studies by Comstock and Piak (1991) found that families of low-income status watched television more than their more affluent counterparts. Vandewater and Bickham (2004) reported that children who watched educational television from age 2 to 4 performed better on measures of vocabulary, prereading and math, and school readiness at age 5 than those who did not watch educational television. Children in families of low socioeconomic status were particularly likely to watch entertainment designed for older audiences as well as cartoons that contained violence and had little educational or social value. In fact, children in families with the lowest incomes were least likely to watch educational television, therefore having a more negative effect on cognitive and social development (Huston & Wright, 1997).

The socioeconomic mix of children's neighborhoods is related to educational success and completed years of schooling. Duncan and Brooks-Gunn (1997) contend that poor parents are constrained in their choice of neighborhoods. Low income may create the

need to reside in extremely poor neighborhoods with characteristics such as crime, many unemployed adults, and neighbors not monitoring the behavior of adolescents. The impact of violence in poor neighborhoods and within the family structure inhibits both the academic and social development of children in poverty (Schwab-Stone, et al. 1999). Harm, both emotionally and physically, occurs regularly within the homes and neighborhoods. Violence has become an integral part of lives, and violence becomes the norm for families and peer groups in poor neighborhoods and communities. Children in higher-poverty neighborhoods have less exposure to adequate resources and positive role models and have a greater risk of affiliating with deviant youth (Peeples & Loeber, 1994). Few resources are available for child development opportunities, including playgrounds, child care, health care facilities, parks, and after-school programs. Brooks-Gunn et al. (1994) reported that neighborhood affluence is associated with child and adolescent outcomes (intelligence test scores at ages three and 5 as well as high school graduation rates) over and above family poverty. A longitudinal study of elementary school children by Entwisle et al. (1997) indicated that neighborhood resources positively affected children's academic growth during the summers when schools were closed, but had inverse effects during winters when schools were in session. When children were not in school, higher SES neighborhoods were better able than poor neighborhoods to supplant cognition-enhancing resources furnished by schools during the academic year. Advantaged students spend their summers going to city and state parks; taking swimming, music, and dance lessons; visiting museums, science centers, and zoos; participating in organized sports programs; and going to the public library. For poor students, the summer months are spent without books, educational stimulation, or even nutritious meals. The more advantaged

students not only maintain their level of achievement, but also increase their achievement through non-school activities, while students from poor families suffer a significant drop in academic learning (Bracey, 2002). Attempting to create a good home environment in poor inner-city neighborhoods is difficult. The housing conditions in poor neighborhoods are often inadequate, unsanitary, dilapidated, and unsafe to the point of dangerous.

Bashir (2002) describes the inside of many deteriorating houses and apartments. The presence of mold, cockroaches and cockroach dust, mice and rats and their droppings, dust mites, carbon monoxide, and environmental tobacco smoke are all more prevalent in low-income and inner-city homes. Homes have no heat in the coldest of months when tenants must sleep with hats and coats during December nights. Water has been disconnected due to consistent overdue water bills. Children have difficulty sleeping through the night due to late-night drug activity. Parents must choose between overprotecting their young and risking rebellion, or allowing them freedom and hoping they can make the right choices in an environment inundated with crime (Kozel 1995). Even in better home conditions, Barr and Parrett (2007) noted that poor children rarely have access to a quiet atmosphere in the home that is conducive to study and homework. They rarely have computers and reference materials, and may even lack pencils and paper. As a result, many poverty-level children maintain a poor record of completing homework assignments and arrive at school less prepared than their more advantaged peers.

Impoverished parents need and want economic independence, yet getting a job creates a need for childcare. Historically, affordable, quality day care for parents who are fortunate to have jobs is an issue faced by families living in poverty (Slavin, 1998). Even with current government daycare subsidies and programs with federal resources for low-

income families, concerns persist about the adequacy and quality of childcare for families living poverty (Greenbert, Dutta-Gupta, & Minoff, 2007). Some families cannot afford the co-payment and the difference between what the state pays and what a quality day care charges (McLeod, 2009). A nationwide poll released in 2006 by the National Association of Child Care Resource & Referral Agencies (NACCRRA) revealed that, more than any other aspect of childcare, parents are concerned about its quality. More than half of the parents surveyed ranked quality as their highest priority. With the downturn of the economy and people losing their jobs or work hours, many families who have never received any kind of public assistance for childcare need to rely on it now more than ever.

Leventhal and Brooks-Gunn (2003) found that low SES neighborhoods had both a lower supply and lower quality of childcare than higher-income neighborhoods. Children from lower-class homes start at a disadvantage with less access to quality day care as infants and to the kind of quality early childhood programs that most children from middle-class homes have available (Barnett, 2008).

Children living in poverty often attend the lowest-performing schools where per-pupil funding is dramatically lower than in affluent communities (Barr & Parrett, 2007). Many states provide the lowest levels of financial support to their highest-poverty school districts. According to a report by the Education Trust (2006), all three primary sources of education funding, the federal government, states, and districts, contribute to the funding disparity. The 10 highest-spending states spent 50% more dollars per pupil than the 10 lowest-spending states that also serve a disproportional share of the nation's poor children. At the federal level, the report found that Title I funds are unevenly distributed to wealthier states that already have the ability to spend more on education. On average nationally, state



and local funds provide \$825 less per student in high-poverty districts than in low-poverty districts. When the numbers were adjusted to account for the higher cost of educating economically disadvantaged students, the gap widened with high-poverty districts receiving \$1,307 less per student than low-poverty districts. A typical high-poverty elementary school of 400 students would receive \$522,800 less per year than an affluent elementary school of 400 students. In 2004, California committed \$188 million as the result of a class-action lawsuit by the American Civil Liberties Union (2000) contending that the state neglected its low-income students.

Recent descriptions of urban poor schools continue to include conditions of overcrowding, infestation of roaches and mice, and limited resources (Quartz, 2003). When the bathrooms are not locked, they often lack toilet paper, soap, and paper towels, and the toilets are frequently clogged and overflowing. Ceiling tiles are missing and cracked, falling off the ceiling onto desks and the floor. Teachers have only enough textbooks for in-class use; therefore, students cannot take books home for homework, only photocopied pages when teachers have enough paper to make the copies. The school libraries are rarely open. Updates have not been made to the reference materials and there are few or no computers for research. School heating systems do not work well with students needing to wear coats, hats, and gloves in class to keep warm. Severe overcrowding creates a need to run a multi-track schedule offering a shortened school day, and subsequently, not all core curricular areas are given the time required for adequate learning. Students who attend schools with these types of conditions achieve at lower levels and end their school careers with fewer opportunities to play a productive role in society than when they began as eager 5-year-olds (Darling-Hammond, 2004).

Students in high-poverty schools report less likelihood of feeling safe than students in schools with the lowest poverty level. The presence of weapons on school campuses poses a threat to the learning environment. Teachers in urban schools with high poverty viewed weapon possession as a serious problem more often than teachers in other school types (Duncan & Brooks-Gunn, 1997). In neighborhoods of violence, there is more likelihood that violence will occur in or near the school setting, making it an integral part of children's lives. Violent behavior often becomes the norm among family and peer groups in the community. With the constant violence surrounding children, they will often act out their own hostility and frustration in the classroom. If energies are distracted due to the anticipation of violence or danger, staying focused is difficult; therefore, problems arise in learning.

Many researchers and analysts argue that poor and minority students are the least likely to have qualified teachers is itself a major contributor to the achievement gap (Thernstrom & Thernstrom, 2003). High-poverty school districts cannot match the salaries, benefits, and resources offered by more affluent schools. The school districts, especially those in rural and urban areas, have difficulty competing for the available supply of adequately trained teachers and, consequently, employ far larger proportions of under qualified teachers. Low-socioeconomic status students are five times more likely than affluent students to have inexperienced teachers who often did not have records of strong academic performance themselves (Darling-Hammond, 1994). The National Center for Education Statistics (2000) found that poor and minority students are about twice as likely to have teachers with fewer than three years of teaching experience. In Florida, teachers at poor schools were 44% more likely to have failed the basic skills test than those at rich

schools (Barr & Parrett, 2007). Data from the National Center for Education Statistics (U.S. Department of Education, 1995) showed that students in high-poverty secondary schools were 77% more likely to be taught by teachers without degrees in the subject they were teaching than were their affluent counterparts.

Haycock (2001) noted that students in schools with a high poverty level, who most depend on their teachers the most for subject-matter learning, are assigned teachers with the weakest academic foundation. A study by Fenwick (2001) found that, in schools with 90% poverty, approximately one-half of the teachers met their state's minimum requirements for certification in the areas of math and science. The problem of out-of-field teachers actually got worse for disadvantaged students during the 1990s. An investigation into the effects of California's class size reduction program on teacher quality and student achievement by Jepsen and Rivkin (2002) indicated that creating a need to increase the teacher workforce led to hiring more unqualified and untrained teachers, particularly for schools of high poverty, thus minimizing the possible benefits of lower class sizes.

Since high-poverty schools tend to have teachers with less experience and fewer credentials, less money is spent on teacher salaries in high-poverty schools than on teachers' salaries in low-poverty schools within the same districts (Darling-Hammond, 2004). Teacher mobility is a much greater problem for poor and minority students; teachers are much more likely to move from urban to suburban schools than vice versa (Hanushek, Kain, & Rivkin, 2004). When new teachers, many of them novice, are first hired in a school district, they are more likely to end up in the high-poverty schools with the harshest conditions because that is where the openings are often located. Teachers within this system, who are often given priority over new teachers, will transfer to the more advantaged

schools as openings arise. This process creates a revolving door of inexperienced educators in high-poverty schools within districts.

Gamoran (2000) found that schools serving poor and minority students often provided a watered-down curriculum and an academic environment less challenging than schools with students of higher socio economic status. An educator may actually dumb-down the curriculum and lower expectations if the attitude is that a particular socioeconomic group is academically weak. Teachers with these perceptions may provide less positive attention, fewer learning opportunities enabled by seating arrangements and assignments of groups, and less reinforcement for good performance. The lower expectations and different treatment of poor children and nonpoor children create the self-fulfilling prophecy (when individuals internalize inaccurate expectations, which cause them to become a reality). Consistent exposure to low expectations can lead to erosion of self-confidence, motivation, and academic success (McKinney, Flenner, Frazier, & Abrams, 2006). Quality mathematics and science instruction is often less accessible to low-income students with low-SES students more than twice as likely as high-SES students to be in a remedial mathematics class. Schmoker (2006) suggested that teachers in high-poverty schools often settle for a curriculum that aims at the most basic elements of content to be learned on the assumption that no more can be managed and that mastery of the basics is an important accomplishment. High-poverty schools are also less likely to offer advanced math and science courses. Nearly 50% of high-SES students reported attending algebra or advanced classes of math, compared with 15% of low-SES students. In science, high-SES students were more likely than low-SES students to report conducting experiments in science classes daily.

Research indicated that, as low as kindergarten and first grade, teachers tend to perceive poor and low-SES students less positively and to have lower achievement expectations for them than for nonpoor children, often based on considerations of speech patterns and dress (McLoyd, 1998). Less demanding and fewer assignments were observed in classrooms with predominately poor and minority students (Barr & Parrett, 2007; Haycock, 2001). Observations of classrooms in high-poverty, urban schools reported coloring assignments in middle school and even high school, rather than writing or mathematics. Brookover (1985) claimed that educators hold different expectations and norms of achievement for students from disadvantaged families. These expectations are often communicated to the students, and they respond by not achieving to their maximum potential.

There are strong indications that poor and minority students also suffer from ineffective classroom instructional practices that have been ingrained in the culture of schools in the United States (Knapp, Shields, & Turnbull, 1995). Haberman (2005) concluded that schools continue to use instructional practices that are not effective for poor students in spite of decades of research documenting their ineffectiveness. He described teacher-centered classrooms; lecture, drill, and practice techniques; and overuse of worksheets as ineffective practices that have a debilitating effect on poor students. Schmoker (2006) referred to "The Crayola Curriculum" to describe how principals and superintendents, in their visits to classrooms, discovered that coloring was the most predominant activity in many of the schools, right up through the middle-school level. Middle-class values were also reflected in many public schools, which create a collision of cultures with the value structures of poor and minority students (Barr & Parrett, 2007).

Pellino (2007) described how high mobility impacts families and compounds the effects of poverty. They may live in places that rent by the week or even the day. Some families may move from town to town searching for work or running from problems. Homeless shelters or battered women's shelters that only allow brief stays are home for a short period of time for some families. Frequent relocation interrupts regular attendance, continuity of lesson content, and the development of relationships with teachers and peers. In addition, high student mobility has a slowing effect on basic skill acquisition, creating a long-term risk of school failure and dropout. Studies by Kerbow (1996) found that 41% of highly mobile students are low achievers, compared with 26% of stable students. According to the U.S. Government Accounting Office (1994), students who move more than three times in a 6-year period can fall one full academic year behind stable students, and children who change schools more than three times before eighth grade are at least three times more likely to drop out of school. Another risk, because academic records are not always available, is inappropriate placement in a new school, such as placement in remedial classes or special education programs, when it is not appropriate (Biernat & Jax, 2000). The difficulty of making friends is compounded, which creates behaviors of hostility or withdrawal due to past attempts to make friends.

Research has concluded that active parent participation has strong, positive effects for student achievement (Barton, 2004). Low-income parents are much less likely to attend school events, do volunteer work, or serve on a committee. Family involvement in education is influenced by culture, income, and language, which creates the perception that public education is designed for children from the middle class, hence the reluctance of low-income parents to be involved with their child's education (McCarthy, 2000). Lareau

(1989) found that low-income families often kept their distance from schools because they tended to see the teachers as primarily responsible for education. Research by Hoover-Dempsey and Sandler (1997) revealed that some schools are more welcoming than others, which, consequently, made parents of low socioeconomic status less comfortable and valued. Some teachers do not view low-income parents as capable of helping or collaborating with the school for their child's education. Most teacher communication is written in the form of letters or flyers rather than face-to-face interactions with parents. The absence of connections voids the intensity required to establish respectful and trusting relationships, which is the crux to improving the education of low-income children (Neito, 1999).

Students' self-beliefs have a strong influence on whether they fail or succeed in school. Emotional trauma is a social issue facing children of poverty that can be very stressful and emotionally depriving. Feelings of alienation, inadequacy, depression, and anxiety result from the lack of emotional nurturing. An environment of poverty often lacks the characteristics that help foster effective learning and academic success. Negative self-status of children can adversely affect their motivation to learn (Pellino, 2007). They may have a fear of failure due to past experiences or may have acquired failure expectations from their parents. As a result of previous demoralizing experiences or self-imposed mind-sets, they have come to believe that they cannot learn.

### Education Initiatives

Several education acts over the past five decades have demonstrated the attempt of the federal government to increase its role in public education (Anderson, 2005). The National Defense Education Act of 1958 (NDEA) was the first effort of the government.

This act created federal mandates and funding for math and science programs, student loans, and foreign language instruction. Lyndon Johnson launched his War on Poverty soon after he became president in 1963 with the goal of equal access and treatment for poor and minority students. A portion of this landmark legislation was the Elementary and Secondary Education Act (ESEA), which increased aid to schools for the Title I provision that continues to provide assistance to schools in order to better serve low-income families.

Anderson Moore, et al. (2009) discussed how the 1970s brought about Title IX, a section added to ESEA to ensure equal treatment of female students in public education. In 1974, Congress passed the Education for All Handicapped Children Act (PL-94-142), with the goal to provide equal access and opportunity by ending the segregation of handicapped students. The Department of Education was established in 1979 to oversee the large numbers of educational policies, giving the federal government significantly more control. In 1994, the Goals 2000: Educate America Act was passed, setting the stage for standards-based educational reform by establishing eight national educational goals. The federal laws prior to 2001 were predecessors to the No Child Left Behind Act (NCLB) in 2002.

A motivating force in educational reform has previously been the images of failed schools, yet the passage of NCLB has created a new sense of urgency. This act was developed to raise accountability for our nation's public school education to ensure that no child was left behind (U.S. Department of Education, 2004). Student and school progress is measured every year to ensure annual improvement toward the national standards. States are required to define standards and then measure performance every year through high-stakes testing.



A strong accountability system requires students to acquire a specific level of proficiency (cut score). Schools must disaggregate test data by subgroups of race, economic status, disability, and English Language Learners. Students in each of the subgroups also must have a 95% test participation rate every year in order to make AYP. Schools are designated as low performing or in need of improvement after two consecutive years of not meeting AYP requirements. Meeting adequate yearly progress (AYP) is the proof of sufficient progress toward the ultimate goal of 100% proficiency in reading and math for all students by the year 2014.

All students are intended to benefit from the No Child Left Behind Act of 2001, with minority and poor students reaping the greatest benefits as the law is specifically targeted to increase their achievement (Sunderman, Kim, & Orfield, 2005). While holding all subgroups of children to the same performance standards has proven to be very challenging for many schools, some across the nation have been successful in providing effective classroom instruction and environments that have closed the achievement gap. Many disadvantaged students have demonstrated repeatedly that they can achieve at high levels when the right policies, attitudes, and instruction practices are in place (Cawelti, 2000).

The research on increasing achievement for disadvantaged students suggests many policies, programs, and instructional changes. Fullan (2003) contends that high-quality public schools are essential for the public good as a whole. They serve as the gateway to economic and life success for millions of under-served children. Barr & Parrett (2007) proposes that schools can have a powerful impact on the academic achievement and success of children living in poverty. Turning around a low-performing school in an

impoverished community can be challenging work, yet there is promising research to support the ideas that it can be done (Center for Public Education, 2007). Lessons learned from high-performing, high-poverty schools could bolster efforts by school leaders and educators to strengthen low-performing schools (Carter, 2000).

#### Practices Increasing Student Achievement in High-Poverty Schools

There is no single approach a school can take to ensure high student performance. The research literature has identified various characteristics of improving the achievement for disadvantaged students. According to research by Marzano (2003), there are 11 characteristics organized by three general categories that influence student academic achievement:

1. School-level factors: a guaranteed and viable curriculum, challenging goals and effective feedback, parent and community involvement, safe and orderly environment, and collegiality and professionalism
2. Teacher-level factors: instructional strategies, classroom management, and classroom curriculum design
3. Student-level factors: home atmosphere, learned intelligence and background knowledge, and motivation

A review of more than 20 studies of high-performing high-poverty elementary schools by Shannon and Bylsma from the Office of Superintendent of Public Instruction in Washington State (2007) distilled nine characteristics found most often:

1. A clear and shared focus
2. High standards and expectations for all students
3. Effective school research

4. High levels of collaboration and communication
5. Curriculum, instruction, and assessments aligned with state standards
6. Frequent monitoring of learning and teaching
7. Focused professional development
8. A supportive learning environment
9. High levels of family and community involvement

According to studies by Barr and Parrett (2007), there are eight specific strategies and practices found in successful high-performing, high-poverty schools:

1. Ensure effective district and school leadership
2. Engage parents, communities, and schools to work as partners
3. Understand and hold high expectations for poor and culturally diverse students
4. Target low-performing students and schools, particularly for reading
5. Align, monitor, and manage the curriculum
6. Create a culture of data and assessment literacy
7. Build and sustain instructional capacity
8. Reorganize time, space, and transitions

Hayes (2008), of the Vermont Department of Education, found that seven key characteristics surface as common across studies of high-achieving, high-poverty schools:

1. High expectations for all students
2. Focus on student achievement
3. Frequent assessment of student progress
4. Support for struggling students
5. Staff collaboration

6. Effective school leadership

7. Parent involvement

Research on factors affecting student achievement yielded an emerging pattern of school improvement strategies and practices for schools with economically disadvantaged students. The ten most commonly found researched-based best practices for increasing student achievement for economically disadvantaged students are discussed. The combination of these attitudes, policies, and practices are most consistently identified for high-poverty schools achieving gains in student achievement.

1. *Schools in which the staff held high expectations, developed positive personal relationships, and genuinely believed that all of their students could learn are able to transform their school more rapidly and more significantly than schools in which the staff lacked confidence in their students' ability and were emotionally detached from their students.* At high-performing schools, students are regarded as an asset and considered to possess a unique gift to offer society (Bauer, 1997). Leaders at high-performing schools repeatedly identified high expectations of student learning as the top priority for themselves and their teachers. Because students responded to teacher expectations, teachers needed to be held to a rigorous accountability in their expectations of student learning.

Payne (2008) noted that a significant relationship must be present for major learning to occur. This means that teachers insist on high-quality work and offer support to build a respectful relationship. Covey (1989) referred to an emotional bank account for the critical aspects of relationships. When emotional deposits are made to the students and respect is shown, a successful relationship can be developed. Support systems, defined as caring

about students, promoting student achievement, being a role model, and insisting upon successful behaviors for the school, help a school create and build relationships.

The emotional climate in an environment of poverty can be stressful and emotionally depriving, resulting in a lack of emotional security and self-esteem among children (Good & Brophy, 2000). These characteristics, which foster effective learning and academic success, create a negative self-status and literally take the motivation to learn from children. Pellino (2007) asserted that teachers needed to make children feel that they are lovable, important, and acceptable human beings by making them feel secure and good about themselves. Positive and respectful relationships are essential for at-risk children.

Provided the notion that student achievement was stronger when students perceived that teachers believed in their ability to perform, Milner, Flowers, and Moore (2003) concluded that establishing relationships with disadvantaged students and being able to connect with them was vital. The teaching of core content and standards was important, but not enough to ensure high student achievement. In high-poverty, high-performing schools, a culture of high expectations was embedded in a caring, nurturing environment where adults and children treated each other with respect. These strong and supportive student-teacher relationships were the catalyst for academic success in high-performing schools.

*2. Schools with strong leadership have been proven to significantly increase student performance and close the achievement gap for low-income students.* Research continually refers to the principal as a key player in sustaining a sense of culture in the success for all students (Cawelti, 2000). Carter (2000) asserts that the most notable factor in creating a high-performing school is the presence of a strong principal who holds

everyone to the highest standards. The principal communicated and operated from strong ideals and beliefs about schooling.

According to Barr and Parrett (2007), principals of high-performing, high-poverty schools focused on students as the priority. They reflected, supported, and encouraged a district vision and mission supporting the belief that that all children will achieve to high levels. Effective principals held high expectations for student learning which, consequently, helped motivate teachers to replicate those expectations for their students. A primary job responsibility of a principal is to monitor the effectiveness of school practices. This is accomplished through overseeing instruction and knowing what is going on in classrooms while developing the capacity to collaborate and share the challenging work of successfully leading and attaining instructional priorities.

Principals successful in increasing student achievement for economically disadvantaged students were knowledgeable about curriculum, instruction, and assessment practices. They valued dialogue that encourages teachers to critically reflect on their learning and professional practice (Blasé & Blasé, 2001). They utilized strategies such as making suggestions that are purposeful, appropriate, and non-threatening. They listened, shared experiences, modeled, solicited advice and opinions, gave teachers choice, encouraged risk-taking, and recognized teachers' strengths. Encouraging, supporting, and collaborating with teachers to make the best use of their talents, experience, and creativity toward the purpose of improving students' achievement were important characteristics of effective principals (Center for Public Education, 2007).

Researchers differed in their definition and the variety of leadership styles they observed in effective principals (Kannapel & Clements, 2005). Most of the principals were

found to be non-authoritarian, leading by collaborative decision-making. Many successful schools had a principal who made frequent observations in the classrooms and was seen about the school on a continuous basis. In other schools, the principal served as an instructional facilitator with teacher leaders who worked closely with teachers and met frequently with the principal. Providing teachers with informed feedback, guidance, support, and professional development that helped them to do their job better was a common theme among most schools. Carter (2000) found that effective principals regarded the hiring and training of their teaching staff as one of the most important responsibilities. They were advocates for small classes and additional resources to meet the needs of their schools. An essential element for raising achievement for disadvantaged students was most often the presence of a skilled principal who promoted a professional learning community with a shared mission for teaching and learning.

3. *A culture of assessment procedures and data to guide decision-making was fundamental to a school's achievement and improvement.* Nearly every study of high-performing, high-poverty schools identified a systematic process to collect, analyze, and monitor assessment data as their foundational building block (Blankstein, 2004). Federal and state mandates based on No Child Left Behind require schools to accelerate their efforts to implement systems of collecting student data that will provide classroom teachers with the composite information they need to guide instruction, particularly for underachieving students. The commitment of teachers in this process was critical to constructing usable and understandable records of student data so that timely interventions could be initiated (Barr & Parrett, 2007). Massell (2000) found that maintaining the status

quo resulted in little change in student achievement; therefore, staffs of successful schools examined the data routinely and used them as a key strategy for change.

Schools in a study by Nathan and Johnson (2000) also engaged several other valuable approaches beyond the mandated tests. Some schools conducted assessments as often as once a week in reading, mathematics, spelling, or other subjects. Others established benchmarks in primary academic subjects that they used to assess every child every month or two. A pre-test and a post-test structure was used to provide data with which teachers can adjust their strategies to meet the learning needs more effectively. Teachers used these systems of data to diagnose learning issue quickly to provide immediate help to students who are struggling. McGee (2004) called the short ongoing, diagnostic assessment an “internal capacity for accountability” (p. 114).

Stiggins (2001) stated, “to meet standards in the new world of educational assessment, it is imperative for teachers and students to become partners in the process and work together to identify deficiencies, plan for growth, and focus instruction” (p 12). Learning must be organized into meaningful, reasonable blocks, and assessment must be used to help each student achieve these sequential blocks. To be effective with underachieving poor students, schools must plant a seed of hope in the neediest students and must nurture a strong and growing sense of personal efficacy and determination. The use of assessments will help students learn that they can indeed learn.

Assessment-literate classrooms embody the five principles of assessment for learning, which are identified by Stiggins, Arter, Chappuis, and Chappuis (2004). The essential principles of sound classroom assessment practice are clear purposes, clear targets, sound design, effective communication, and student involvement. Applying the



five principles in a thoughtful and consistent manner has demonstrated significant gains in student achievement, especially for underachieving, poor children (Stiggins & Chappuis, 2006).

4. *Highly effective teachers were found to be the most influential factor in student achievement.* Effective teachers are those who are successful with student of all achievement levels regardless of the levels of heterogeneity in their classes (Haycock, 2001, Marzano, 2003,). Wright, Horn, and Sanders (1997) concurred in their study that the most important factor affecting student learning is the teacher. Improving education by increasing the effectiveness of teachers was a clear implication of this finding.

Students in classes with the most effective teachers gained much more achievement than is expected while students attending classes with the least effective teachers gained less achievement than expected. Marzano (2003) asserted that ineffective teachers might actually impede student learning. The literature repeatedly reported several characteristics of effective teachers that are observed in varying degrees at all high-poverty, high-performing schools. A school has a lower chance of good results without highly committed teachers who are willing to stay late, help students during lunch and free periods, and provide individual assistance that students need during class time (Cawelti, 2000). The teachers believed that instruction determines students' academic success.

Academic content was the focus with teachers understanding their learning goals and making them clear to their students. Time on task in their classrooms was high, and they spent minimal time on transitions. They actively engaged students in the learning and related the learning to life experiences. Strategies and activities intended to create self-directed, reflective learning were purposefully introduced by teachers. A balance was

sought between skills-based instruction and higher-level instruction that focused on strengthening students' metacognitive and planning skills (Marzano, 1998).

Teachers at successful schools loved learning and related well to children (Benard, 2003). They worked to establish caring relationships between themselves and students. Effective teacher and student relationships were the foundation that allowed the other aspects to work well. When teachers have good relationships with students, the students accept the rules, procedures, and discipline actions. Teachers are warm and caring, yet clear about purpose, and provided strong academic and behavioral guidance. The most effective classroom managers employed different types of strategies with different types of students. Some students needed encouragement while others only required a gentle reminder, and still others only responded to a firm reprimand (Brophy, 1982). Danielson (2002) reported that the creation of a comfortable and respectful classroom environment cultivated a culture for learning.

5. *Successful schools developed a guaranteed and viable curriculum aligned to standards.* Schools where low socioeconomic status students were achieving proficiency carefully compared state standards with the written curriculum for each subject and grade level (English & Stephy, 2001). A common instructional framework guided curriculum, with teaching and assessment as the basic foundation of the school. Teachers were clear about what students were expected to know and ensured that students completed their courses with the essential knowledge and skills for the course or grade level. School teachers and administrators invested considerable efforts to ensure that the curriculum was articulated vertically and horizontally. Vertical planning required that secondary and elementary teachers for each subject area worked closely to ensure a thorough content

articulation. Teachers of the same grade level or subject provided instruction built on previously learned concepts, using assessments embedded in the instructional program's benchmarks (Schmoker, 2006). An aligned curriculum improved the teaching and learning of skills tested on state assessments, which elevated student test scores on state assessments (Barr & Parrett, 2007).

Danielson (2002) referred to curriculum alignment and coherence as the defining characteristic of the school's program. Content and performance standards went beyond setting common and coherent curricular goals by providing a framework for measuring whether students are making progress. Benchmarks specified the content to be learned, the context in which the learning must be demonstrated, and the degree of mastery. All programs, textbooks, and instructional materials were aligned to the curriculum, permitting students to engage with it in a meaningful way. Quality professional development about curriculum alignment concepts, as well as the use of assessments to validate learning and to make curriculum and instructional decisions, was provided.

Many successful schools implemented pacing guides and assessment calendars to direct their daily or weekly instructional progress. These tools provided teachers with expected checkpoints of learning and specific guidelines for lessons and assessments to be used for each content benchmark. Teachers also used the guides as timelines for ensuring that all required content was taught and learned. They also framed an agenda for weekly grade- or subject-level meetings and were helpful in improving parent and home communication. Developing, aligning, and monitoring a curriculum consistent with standards, assessment, and instruction were consistent with schools that successfully raised student achievement (Barr & Parrett, 2007).

6. *A collaborative school environment was established through professional learning communities in successful schools.* High-performing schools committed to collaboration among staff and leadership as the driving force in their work. DuFour, Eaker, and DuFour (2005) described the concept of professional learning communities as the collective capacity of school staff to work together to achieve the fundamental purpose of the school: high levels of learning. Collaboration in successful schools focused on issues of student achievement and instruction, structured by clear agendas with specific tasks and outcomes to ensure the collaboration concretely addresses student needs. School leaders played an active role in facilitating successful collaboration by 1) building time for collaboration into the school day and year, 2) identifying critical questions to guide the work of collaborative teams, 3) asking teams to create products as a results of their collaboration, 4) identifying critical questions to guide collaborative teams, and 5) providing relevant data and information (DuFour, 2001). Principals and other school leaders established an environment with collaborative problem-solving and team-centered relationships. Support to help the team work effectively was necessary for the achievement of the school's professional learning community goals.

The most significant element to increase achievement for disadvantaged students was a change in the manner in which instruction was delivered (Barr & Parrett, 2007). Professional learning communities provided the collaborative structure to focus on creating lessons and teaching units until they have the maximum impact on student learning. Sharing ideas and teaching practices occurred on a consistent basis. Teacher teams deliberated over each step and the best possible sequence of steps in a lesson, how to most effectively introduce and explain the concept, how much time to devote to practice

exercises, and how to assess and adjust during and after each lesson and unit. The staff members felt responsible to help each other do their best.

Effective organizations worked together to create improvement processes that are driven by results and focus on achieving specific, measurable improvement goals (Schaffer & Thomson, 1992). Danielson (2002) reported the importance of frequent data collection and analysis to gain insight into teaching, learning, interventions, monitoring progress, and areas of curriculum improvement needs. Symonds (2004) found that teachers in schools that have narrowed the achievement gap among groups use assessments more frequently and work collaboratively to analyze and act upon the data. Using the existing capabilities and potential among the group to teach each other the practice of teaching was more often accomplished when it was regarded as a team effort. Schmoker (2006) found that, when the teacher teams were granted both autonomy and responsibility for short-term results, their on-the-ground expertise had a larger and more direct impact on instruction and achievement.

Professional learning communities created a strong sense of teacher efficacy and accountability. Teachers did not make excuses for poor performance, and there was a shared responsibility for student development and success. Improving student achievement was the collaborative goal for teachers and principals, with a commitment to lifelong learning. DuFour (2001) contended that schools successful in increasing achievement for disadvantaged students focused on professional development that emphasized collaborative work among staff members to engage in professional inquiry rather than finding the right trainer or workshop to attend.

7. *High-quality, sustained, intensive, and ongoing professional development and teacher training were a hallmark of high-performing schools.* McGee (2004) conceded that there was a different set of knowledge, skills, and attitudes required of educators in high-poverty schools than those working in more affluent schools. Professional development in high-performing schools differed distinctively from other schools. It was directly linked to improvement in teaching that increased student achievement (Barth et al., 1999). Opportunities for collegial inquiry, help, and feedback, while connecting to external expertise and respecting teachers' discretion and creativity, were provided. The professional development was often team-based and school-wide, reflecting improvement as a continual process (Center for Public Education, 2007).

Darling-Hammond and McLaughlin (1995) described professional development as opportunities to enable teachers to share their knowledge and develop communities of practice. All staff members are engaged in sustained, intellectual rigorous study of what they teach and how they teach it (Sparks & Hirsch, 1999). The short-term and episodic, traditional workshop is replaced with learning collaboratively and solving the day-to-day problems of teaching. Garet et al. (2001) emphasized the need for teacher learning to be integrated into the daily life of the school, as it was most effective when explicitly connected to teachers' work with their students. Teachers in schools who were successful in increasing student achievement for disadvantaged students identified problems and questions, thought about and discussed their work, gathered data, and used what they learned to inform their practice.

Effective professional development reflected the best available research about teaching and learning. Teachers acquired new knowledge of content and students while

developing an understanding of their own knowledge (Wilson & Berne, 1999). Modeling, coaching, and mentoring enabled teachers to learn new skills and un-learn previous beliefs and practices. Principals provided opportunities for teachers to learn from and with their colleagues. The teachers' workday included professional development as it is embedded into all of the daily activities.

8. *Schools successful in raising student achievement for low-income students recognized the importance of parents as partners in learning.* Students with parents who are involved in their school have few behavior problems, achieve better academic performance, have better attendance, and are more likely to complete secondary school (Henderson & Beria, 1994). When parents are involved as partners in their children's education, a sense of efficacy is developed and communicated to children, with positive academic consequences (Cummins, 1993). Furthermore, Barr and Parrett (2007) suggested that schools where children of low-income families are achieving tend to develop strong, complex partnerships with families.

Although high-performing schools encouraged parent involvement, it usually took a variety of forms in different schools. Jesse, Davis, and Pokorny (2004) found that, in some successful schools, numerous communications were sent home to parents, but active involvement was not encouraged. Other schools were found to frequently engage parents actively in learning and understanding standards as well as how they apply to student work (Barth et al., 1999). Parents were viewed as essential partners in the learning process by teachers and staff at these schools. The contract model was utilized, where parents actually signed a contract with the school, committing to help their children with homework and to get their children to school on time.

Successful schools demonstrated an environment where parent involvement was respected and appreciated. Staff viewed parents as a critical part of the educational team and they took many extra steps to ensure the involvement of parents in the educational program. Learning about families' cultural background, values, and attitudes was a goal for teachers and leaders, as this was the first step in fostering positive relationships (McGee, 2004). Time was spent discussing the barriers that prevented parents from participating in their children's education so they could make efforts to eliminate or reduce these barriers. The principal and teachers made a conscious effort to involve parents in their children's education before any problems could arise in the classroom. At the beginning of the year, teachers called parents to introduce themselves and let parents know how to get in touch. Parents were invited to school activities through phone calls or personal notes. They were encouraged to observe the class or spend time helping in the classroom, lunchroom, or during activities. Teachers kept parents informed about what was happening in the classroom and communicated the need for parents to talk to their children about school. Schools also provided meals, childcare for younger siblings, and homework help for school-aged students at evening parent sessions in an effort to increase attendance. Some effective schools in poor communities provided a wide variety of services that have been referred to as full-service schools. They coordinated the many needs of poor children and their families, such as health services; psychological support; curriculum for prevention of substance abuse, suicide, and violence; legal aid centers; and job-search services.

Principals were instrumental to schools that were most effective in involving parents in the educational process as they translated their commitment to parent relationships into observable practices (Blasé, Blasé, & Phillips, 2010). Principals reached



out directly or enlisted parent liaisons to reach out to parents and show them how to support their child's learning. Opportunities for parents to learn were provided, with materials in different languages and interpreters for those who spoke other languages. School leaders and teachers went to parents' homes, churches, or community meetings to seek out parents who were reluctant to come into schools. Principals fostered school cultures that stressed openness and communication. Overall, schools acknowledged the important link between parent involvement and increasing student achievement for economically disadvantaged students (Epstein, 1995).

9. *Teachers in successful schools provided an environment of respect with effective classroom management strategies that assured teaching and learning were the focus.* Wang, Haertel, and Walberg (1993) found that classroom management ranked first in terms of importance among factors affecting student achievement. The definition of effective classroom management included the confidence of teacher actions in four specific areas: 1) establishing and enforcing rules and procedures, 2) carrying out disciplinary actions, 3) maintaining effective teacher and student relationships, and 4) maintaining an appropriate mental set for management (Marzano, 2003). Children of poverty have difficulty in achieving success in public schools because the culture of the family is, at times, different from that of the classroom. Students must learn to practice self-control and self-governance, with which poor or externally controlled student may have had little or no previous experience. Evertson (1989) emphasized the need for children to have guidelines for how to behave, when to move about the room, and where to sit if the teacher were to conduct instruction for children to work productively. Procedures for collecting assignments, turning in late work, or participating in class discussions were established in

effective classrooms. Researchers suggested that classroom management was most effective with poor children and youth when teachers were consistent in their management techniques in a structured environment so that children knew what was expected of them (Payne, 2001). Routines were well established; procedures for handling behavior problems were in place; and transitions were completed with little or no wasted time. Schools that have made dramatic improvements in achievement have scrutinized daily classroom practice for time management (Chenoweth, 2008). Classroom and school routines were established so that endless amounts of time are not spent going to the bathroom, getting out and putting away books and materials, and going from one activity or class to another. Transition times were minimal, and the pace of the instruction is rapid, facilitating high instructional density.

An appropriate mental set included a high level of with-it-ness found in exemplary teachers' classroom management (Kounin, 1983). They were extremely cognizant of what was happening in their rooms and possessed a "sixth sense" that enabled them to intervene before a problem escalated. The pace of instruction was rapid, and teachers were successful in engaging virtually all of their students in the work of the classroom. Common interests and values were shared between students and teachers. Content was clearly explained, and the curriculum connections were emphasized. Students had numerous opportunities for practice and to apply what they were learning. Teachers assisted students in becoming more independent learners by modeling instructional strategies and teaching self-monitoring strategies. Generally, those schools most successful in raising student achievement stressed meaning-oriented instruction, encouraged students to take personal

responsibility for their learning, and assigned tasks that asked more, rather than less, of their students.

Findings recorded by Stage and Quiroz (1997) found that interventions with a combination of punishment and reinforcement, or positive and negative feedback have the most effect on reducing disruptive classroom behavior. Keeping a healthy balance between rewards and punishments decreased behavior that affected the learning of students and allowed teachers to make good use of instructional time. Involving parents, guardians, and students in the establishment of rules, regulations, and consequences was emphasized as essential to educate children of poverty.

10. *Successful schools consistently found ways to provide additional instructional time for students who are achieving below proficiency.* Research on high-achieving, high-poverty schools has identified essential characteristics, including extra instructional time, extra support, and new ways of organizing schools, for increased student achievement (Barr & Parrett, 2007). If students arrive at school below grade level academically and fall further behind, it is unlikely that they will ever catch up unless they are provided with extra instructional time. An individual and intense emphasis for instruction on the specific areas in the required curriculum in which students need help is necessary. A larger block of uninterrupted time for reading, language arts, and mathematics time on task is increased for those particular subject areas. Schools also protect instructional time by emphasizing efficiency during lunch, recess, breaks between classes, and announcements. Every effort should be made to convey the message that class time is sacred time and should be interrupted for important events only (Marzano, 2003).

Extended day programs, before and after school, in addition to Saturday programs, closely tied to the regular school day instruction, have been found to increase student achievement (Chenoweth, 2008). The extra time is used for remediation and enrichment or for completing homework with technology, library resources, and individual teacher assistance. Many schools also used the extra time as an opportunity to provide interesting classes such as music, drama, and foreign languages. Because poor children and youth experience a significant loss of achievement during the summer months, a variety of approaches were used to provide nutrition, recreation, and academic remediation and enrichment during the summer months (Barr & Parrett, 2007). Some schools adopted a year-round schedule; others extended the school year into the summer months so that the traditional three-month summer vacation was reallocated into several shorter breaks. Part-time summer programs have also been developed a few days each week in cooperation with public libraries, parks and recreation departments, local businesses, and universities to assist students of poverty as a strategy to catch up academically or accelerate. Programs for extended school days and school years were staffed with teachers, adult volunteers, mentors, older peer tutors, and university students. Federal Title I funds or grants, such as the federal 21<sup>st</sup> Century Community Learning Center program, were used to pay for the students' extra time.

Students from low socioeconomic-status homes often begin school with language skill deficiencies, a limited vocabulary, and few technological advantages. The lifelong, positive outcomes of effective preschool and full-day kindergarten programs for helping prepare children for school is well documented (Barnett, 2008). Research on preschool programs for 3- and 4-year-olds finds consistent and powerful impacts of high-quality

programs on the cognitive performance of young children. Barnett's (2008) studies clearly showed that quality preschool programs for poor children produced large benefits. These programs more than repaid the public's investment. One dollar invested in preschool education will save \$5.73 in subsequent spending on special education, public assistance, and crime. Therefore, effective schools have made efforts to enroll young children in preschool programs, Head Start programs, and full-day kindergarten.

### Summary

In this chapter, information was presented on exploring the connections between educational achievement and socioeconomic status. Studies found that there was a strong relationship between areas of concentrated poverty and low achievement (Brooks-Gunn, Duncan, & Maritato, 1997). No Child Left Behind was the first time the nation ever declared that schools have a responsibility to teach every single child to meet the state's standards of learning (Chenoweth, 2008). A policy decision was made as a nation to no longer tolerate widespread failure in schools serving poor and minority children.

There is presently an expectation to help all students achieve high standards, with a newfound desire for information about what successful schools have done. The research on high-performing schools demonstrates that schools, regardless of their poverty level, can become places where children make progress and perform well academically. It is the responsibility of school leaders and educators to identify the factors that can most positively impact learning for disadvantaged students in their respective schools so that changes can be made for increasing achievement of all students and, subsequently, meeting the NCLB 2014 deadline of all students meeting state testing standards.

As the literature illustrated, high-poverty schools must engage in a sustained focus on multiple factors to achieve gains in student performance. Schools in the most troubled neighborhoods can become places where children make progress and perform well academically. Those schools that have become high-performing schools cultivate a culture of high expectations, for students and teachers alike, that emphasizes academics and student learning, and engages in continual assessment and efforts to improvement (Center for Public Education, 2006).

The Review of Literature found an abundance of related studies regarding education for children living in poverty. A framework to demonstrate the themes that emerged for each research question in the study was developed based on research (Barr & Parrett, 2007; Hayes, 2008; Marzano, 2003; Shannon & Bylsma, 2007). Research question 1 addressed common factors associated with lower academic achievement for children living in poverty. Twenty-two themes were identified and supported by a variety of researchers, many of whom had numerous papers and books published on the topic of poverty. Research question 2 addressed school-based practices that increase academic achievement for poverty-based, disadvantaged students with 10 themes emerging and supported by various researchers. The themes within each of the research questions were supported by the findings of leading researchers in the study of poverty and education. The aforementioned themes, which permeated throughout much of the literature, were centered on poverty in urban areas; therefore, this study will uncover the issues of poverty and education in rural educational settings within a literature-based framework (Appendix A).

## CHAPTER III.

### METHODOLOGY AND PROCEDURES

The purpose of this study was to investigate the best practices implemented for increased student achievement in elementary schools with high-poverty enrollments. The chapter describes the methodological procedures utilized in this study. It is divided into six sections. The first section includes a brief introduction to and the research design for the study. The research questions and what type of study was used are included. The Sample Population is discussed in the second section. The Instrumentation is explained in section three. Reliability and Validity of the instrumentation are reviewed in section four. Sections five and six discuss the data collection and Data Analysis Procedures, respectively.

#### Introduction and Research Design

A review of the literature provided the basis for a framework developed to demonstrate the themes that emerged for each research question in the study. Although passage of the No Child Left Behind federal legislation has made this a national issue, the majority of the research has been with urban schools that have high-poverty status. The research questions in this study are state specific as they take into account the rural setting of North Dakota schools. The following research questions were used to guide this study:

1. What factors are associated with lower academic achievement for children living in poverty?
2. What school-based practices were perceived to help increase the academic achievement of children living in poverty?

Gay and Airasian (1992) identified survey research as useful for investigating educational issues. Within this educational research study, a quantitative method was used

to gain a general sense of the practices being utilized in high-achieving elementary schools with a high rate of students living in poverty. A literary-based framework was developed based on the research themes ascertained regarding the factors associated with poverty and practices for increasing the achievement of students living in poverty (Appendix A). This study utilized a survey based on these key factors and practices of high-poverty schools as summarized in the literature review.

### Sample Population

The target population for this study consisted of teachers from 29 elementary schools in North Dakota with a poverty level of 40% or higher as determined by the number of free or reduced meal applications on file at their school district office for the month of October 2009. When a school reaches a poverty level of 40%, it qualifies for Schoolwide Title I, which uses its Title I allocation to upgrade the entire educational program of the school in order to raise academic achievement for ALL students at the school. The students and all the teachers at the school use Title I funds to improve the school's entire academic program (North Dakota Department of Public Instruction, 2010). This information is reported on the North Dakota State Automated Reporting System (STARS), an online standardized system adopted by the superintendent of public instruction. The North Dakota Department of Public Instruction's Child Nutrition and Food Distribution unit verifies the free and reduced meal counts to assure accuracy. Federal school funding through Title I, a program to assist schools in providing additional services to struggling students, is based on these data. In addition to qualifying as high-poverty, these schools had met the adequate yearly progress standards set by the North Dakota



Department Public Instruction (2009a). This measurement was the indicator for “high performing”.

### Instrumentation

A survey designed by the Vermont Department of Education (2008) was examined and utilized as a resource, but not used in its entirety, as it included various questions not relevant to this study. The survey instrument was developed to reflect the research questions using the literature-based framework to create the survey questions. The survey was divided into three parts: demographic information, factors of poverty increasing the risk of lower academic achievement, and characteristics of a high-poverty school that had helped with gains in student achievement (Appendix B). The first section was a demographic portion designed to provide information regarding school district size. For purposes of this study, a rural school district was defined as one having 599 students or less. An urban school district had an enrollment of over 600 students as defined by the North Dakota Rural Education Achievement Program (North Dakota Department of Public Instruction, 2009b). Years of experience and whether the teacher had participated in courses regarding poverty were also included in the demographic portion and all of the items were provided in a multiple-choice format.

The second section, dealing with factors of poverty, included Likert-type items to determine the extent that factors of poverty affect the learning achievement of students. “No Basis to Judge” was appropriate to include as a choice if the belief was held that some of the respondents had very little or no knowledge of the subject being measured (Patten, 2001). The final section of the survey asked teachers to judge the level of extent school-based practices were being utilized in the school by using a Likert scale for the degree of

use or implementation. A scale of 4, not disclosed on the survey, was used, 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree, because the school-based practices would either be occurring or not occurring. This was a forced choice method (Ross, 2002) with the middle option of neither agree nor disagree not available. Patten (2001) maintains that if the researcher believes that all potential respondents have developed either a positive or a negative attitude toward the object of the scale, it is appropriate to omit the “neutral” or “undecided”. Creswell (2005) noted that open-ended responses permit a researcher to explore the responses to the closed-ended questions. Two open-ended questions at the end of the school-based practices section of the instrument encouraged respondents to identify the school-based practice they perceived to have the most influence on student achievement and other general comments.

#### Validity and Reliability

A panel of six experts were contacted by email and asked to review the survey for content/construct validity (Appendix C). The experts were invited to provide feedback on item clarity, appropriateness, and general understanding of the instrument. The faculty adviser and members of the committee were also asked for suggestions about improving the survey to enhance and assure contextual content validity. A final draft of the survey was developed based on feedback from the panel of experts. A pilot test for reliability was not completed as an identical population could not be identified for this test. A convenience sample was used because there were only 29 elementary schools that fit the study’s population requirement of having a poverty level of 40% or more and achieving adequate yearly progress (AYP). Because the population was narrow, these schools were used for the research study. Convenience sampling is used when the participants are available and

the researcher's personal judgment is that they are representative of the entire population (Creswell, 2005). The NDSU Group Decision Center (GDC) designed the survey on paper for mail delivery. The Institutional Review Board (IRB) approved the research study prior to data collection (Appendix D).

#### Data Collection Procedures

A letter was sent through email on May 12, 2010 to elementary principals in 29 schools in North Dakota that had been identified as having a student population of 40% or more with free and reduced lunch (Appendix E). The schools had also made adequate yearly progress on the North Dakota State Assessment the previous year, which indicated that the schools were successful in educating students living in poverty. The letter asked for approval in their school's participation in the study. If approved, they were asked to place in classroom teachers' school mailboxes an envelope containing a consent letter to participate in the study and the survey (Appendix F). The consent letter indicated that participation was on a voluntary basis and the principals would not be informed of their decision to participate. As an incentive for completing this study, respondents had the opportunity to register for a drawing for one of three \$25 gift certificates. Self-addressed, stamped envelopes were included in the envelopes to use for returning the survey.

The data from the survey were collected from each of the participants through the postal service. The paper surveys were coded into the online survey from the GDC at North Dakota State University. The raw data, shared in Microsoft Word and Excel documents, were emailed to the researcher from the GDC. An analysis was conducted with Microsoft Excel and SAS.

## Data Analysis Procedures

Data from the completed surveys were collected through the GDC and coded into an excel spreadsheet. The data from the excel spreadsheet was exported into SAS to perform the statistical analysis. Descriptive statistics were used in the data analysis in order to generalize the results to all schools in North Dakota with high-poverty enrollments.

Table 2 highlights the research questions, corresponding survey questions, scales of measurement, and statistical tests that were used in this study.

Table 2. Research Questions, Survey Questions, and Scales of Measurement

Research Questions	Survey Questions	Scales of Measurement	Statistical Procedures
	Demographics - Survey Questions 1-2	Ordinal	
	Demographics - Survey Question 3	Nominal	
1. What are the common factors associated with lower academic achievement for children living in poverty?	Survey Question 4-21	Likert Items Continuous	Descriptive T-test
2. What are the school-based practices that increase academic achievement for poverty-based disadvantaged students?	Survey Questions 22-63	Likert Items Continuous	Descriptive ANOVA
	Qualitative Questions 64-65		Summary of qualitative comments

Education level, years of teaching experience, number of years at the school, and participation in professional development regarding the understanding of children living in poverty were tested for their effects, if any, on the responses to each of the survey questions. Basic descriptive and graphical analysis were used to summarize data from each of the survey questions, including the demographic questions. A t-test is used to determine

whether two means are significantly different as a selected probability level (Gay & Airasian, 2003). The t-test was used to determine if there was a significant difference between urban teachers (600 or more students in the district) and rural teachers (599 or less students in the district). An Analysis of Variance (ANOVA) test is the appropriate analysis technique to determine whether there is a significant difference involving three groups (Gary & Airasian, 2003). An ANOVA was used to determine if there were significant differences between the years of teaching experience (new teachers with 0-5 years, experienced teachers with 6-10 years, and veteran teachers with 11 or more year's experience). Means and standard deviations were calculated for each of the scaled responses to assess whether respondents believed a factor was associated with lower academic achievement in children living in poverty and whether the school-based practice led to increased academic achievement in children living in poverty. The standard deviation was used to measure how the closely the data were distributed about the mean on the survey items.

## CHAPTER IV.

### ANALYSIS OF DATA

#### Introduction

This study was conducted to determine the best practices for increased achievement in elementary schools with high-poverty enrollments. Prior to data collection, the researcher identified 29 elementary schools in North Dakota having 40% or more students receiving free or reduced lunch and had made AYP the previous year. A letter was sent to the principals of the 29 schools requesting permission to survey their teachers. Permission was granted by all 29 principals. Surveys mailed to all 256 elementary teachers in the 29 elementary schools yielded responses from 176, resulting in a 69% response rate. The following chapter presents the data analysis (mean scores, standard deviation, relative frequency, analysis of variance, and qualitative summary) and the results in the three broad sections as follows:

1. Demographics
2. Research Question 1: What factors are associated with lower academic achievement for children living in poverty?
3. Research Question 2: What school-based practices are perceived to help increase the academic achievement of children living in poverty?

#### Demographics

Demographic information was shown in Table 3 to better describe the participants and the school environments in which they worked. Over one-half (56%) of the teachers responding to the survey were working in urban school districts with more than 600 students enrolled. The remaining 44% of the teachers worked in rural school districts with

599 or less students. Close to one-half (46%) of the teachers had taught in their schools for 11 or more years (veteran), with 23% being in the school 6-10 years (experienced), and 31% teaching in the present school for 0-5 years (new). The majority (79%) of the respondents had participated in professional development regarding poverty, with only 21% not having any type of professional development on the topic of poverty or teaching students who live in poverty.

Table 3. School District Size, Years of Teaching at the Present School, and Professional Development

Variable	Respondents	Percentage
School District Size		
Rural (599 or less)	77	44%
Urban (600 or more)	99	56%
Years Teaching at Present School		
0-5 (New)	54	31%
6-10 (Experienced)	40	23%
11 or more (Veteran)	82	46%
Professional Development Regarding Poverty		
Yes	137	79%
No	37	21%

### Factors Associated with Lower Academic Achievement

#### *Research Question 1*

The first research question was “What factors are associated with lower academic achievement for children living in poverty?” Teachers were asked to indicate to what extent the factors affected the achievement of students in their school. The categories offered a 4.0 Likert Scale (Not at All = 1, Some Extent = 2, High Extent = 3, and Very High Extent = 4, and No Basis to Judge = 0). A descriptive statistical test to determine frequency of responses was used. Table 4 describes the frequency teachers observed the factors that affect achievement in school. The ratings of very high extent and high extent

were combined for reporting purposes. The factors are listed from an ordinal perspective from highest to lowest on the frequency rating and all fell within the high extent to some extent range. Literature indicates that these factors were reported as having some effect on student achievement.

Lack of parenting skills was reported with the highest number of responses, 149 (85%), indicating that it affected student achievement to a high extent. The next highest response was attendance issues with 118 (68%) respondents indicating that it affects school achievement to a high extent. Lack of quality childcare and lack of parent involvement each yielded 117 (67%) responses for having a high extent of influence on student achievement. Poor nutrition, living in low income housing, and viewing violence on TV were rated by 100 or more respondents as affecting student achievement to a high extent with frequency ratings of 103 (59%), 103 (59%), and 102 (58%) respectively.

There were 96 teachers (55%) who indicated that students having a high mobility rate were affected to a high extent regarding student achievement. Three factors, “neglect or abuse,” “no preschool,” and “having a low self esteem,” were rated by 86 (49%), 82 (47%), and 82 (47%) teachers respectively, in regards to having a high extent of influence on student achievement. The four factors receiving the fewest ratings of having a high extent effect on student achievement were health issues 42 (24%), poor housing conditions 38 (22%), no prenatal care 32 (18%), and low birth weight 24 (14%). However, when combining the frequency of having a high extent and some extent of effect among these four factors, over 57% (n = 176) of the respondents rated these as having a negative effect in the achievement of economically disadvantaged students in high poverty schools. There were three factors, poor housing conditions, no prenatal care, and low birth weight



receiving frequency ratings of 46 – 67 (over 33%) indicating that there was no basis to judge whether it had an effect on student achievement. Overall, teachers' perceptions for all factors support the theoretical framework in finding them as affecting the achievement of economically disadvantaged students in high poverty schools.

Table 4. Factors Affecting Achievement of Students

	<i>High Extent</i>	<i>Some Extent</i>	<i>Not At All</i>	<i>No Basis to Judge</i>	<i>Not Answered</i>	<i>Mean</i>	<i>SD</i>
Lack of parenting skills	149	23	2	1	1	3.38	.76
Attendance issues	118	51	5	1	1	2.97	.86
Lack of quality childcare	117	57	0	1	1	3.02	.78
Lack of parent involvement	117	57	0	1	1	2.95	.78
Poor nutrition	103	61	3	9	0	2.99	.94
Live in low income housing	103	56	7	10	0	2.91	.95
Viewing violence on TV	102	66	4	4	0	3.18	.89
High mobility rate	96	63	4	10	3	3.01	1.0
Neglect or abuse	86	74	3	13	0	2.93	1.0
No preschool	82	92	1	1	0	2.95	.76
Low self esteem	82	92	1	1	0	2.63	.76
Violence in home	60	74	6	34	2	2.83	1.21
Single parent family	55	78	8	31	4	2.88	1.22
Older housing	54	71	11	39	1	3.01	1.29
Health issues	42	101	7	22	3	2.63	1.08
Poor housing conditions	38	83	8	46	1	1.75	1.15
No prenatal care	32	78	7	58	1	3.20	1.40
Low birth weight	24	77	6	67	2	3.33	1.45

## Practices That Increase Student Achievement in High-Poverty Schools

### *Research Question 2*

What school-based practices are perceived to help increase the academic achievement of children living in poverty?

The following tables address the school-based practices that increase the academic achievement of children living in poverty. The practices were grouped into ten different categories with 4-6 descriptors in each category. The categories offered a 4-point Likert Scale. Analysis of descriptive data examined the frequency of agreement and disagreement regarding the school-based practices that were occurring in respective schools. The mean and standard deviation of all three groups were reported, in addition to the means of the individual groups, when the data indicated a significant difference with the alpha level set at .05. The tables also show the data with the probability levels set at .05. All other data not statistically significant is shown in the tables in Appendix F.

A t-test was completed to determine if the difference in the means of rural teachers and urban teachers for each practice was significant. Respondents who did not answer a question were not included in the analysis of agreement or disagreement. Non-responses to questions ranged from 0 to 7, with one item having 10 non-responses. The ANOVA test was conducted to determine if a significant difference existed between new teachers (0-5 years), experienced teachers (6-10 years), and the veteran teachers (11 or more years).

Table 5 addresses the school-based factor of high expectations. Over 90% of the respondents believed that their school was one that held high expectations for students. The mean scores ranged from ( $\mu = 3.32$ ) to ( $\mu = 3.45$ ). The standard deviation supported the

high level of agreement. With the alpha level set at .05, the t-test between urban and rural teachers found no statistical significant difference for any of the school-based practices.

The ANOVA test conducted for the three groups indicated that there was a statistical difference in the level of agreement between the new and experienced teachers ( $F = .05$ ). New teachers ( $n = 54$ ) had a higher level of agreement ( $\mu = 3.55$ ) compared to the experienced teachers ( $n = 40$ ,  $\mu = 3.28$ ). There was no statistical difference in the level of agreement for developing positive personal relationships with students and students having an awareness of expectations.

Table 5. High Expectations

School-Based Practice: Expectations for Learners	Mean	SD	Level of Agreement	Statistics p-value
22. Staff hold high expectations.	3.44	0.54	98%	.74
ANOVA				.05*
*New (n = 54)	3.55	0.50		
*Experienced (n = 40)	3.28	0.55		
Veteran (n=82)	3.46	0.54		
23. Staff develop positive personal relationships with students.	3.32	0.54	92%	.45
24. Students are aware of expectations.	3.45	0.61	96%	.35

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Data analysis in Table 6 shows that the five items regarding leadership had a high level of agreement with means ranging from 3.19-3.47. A t-test analysis between urban teachers and rural teacher revealed that there was a statistical significant difference at the .05 alpha level regarding the principal's knowledge of standards and the curriculum. With the alpha level set at .05, the t-test indicated that urban teachers had a higher level of agreement ( $t = .02$ ). There were no statistical differences between the urban and rural teachers for any of the remaining leadership practices.

Table 6 also presents the findings of the ANOVA test for the three groups to determine if there was a significant difference between any of the groups. The ANOVA conducted show a significant difference ( $p = 0.24$ ) in agreement between the new teachers ( $n = 54$ ) and the experienced teachers ( $n = 40$ ) with regards to the principal monitoring the effectiveness of school practices. The new teachers had a higher level of agreement ( $\mu = 3.38$ ) compared to the experienced teachers ( $\mu = 2.97$ ). There was no significant difference between the three groups for principals' standard and curriculum knowledge, principals setting high expectations for learning, nor principals creating a sense of community.

Table 6. Leadership

School-Based Practice: Leadership	Mean	SD	Level of Agreement	Statistics p-value
25. Principal is knowledgeable about standards and curriculum.	3.47	0.57	97%	.02*
Urban ( $n = 99$ )	3.56	0.56		
Rural ( $n = 76$ )	3.35	0.56		
26. Principal sets high expectations for learning.	3.37	0.62	92%	.74
27. Principal monitors effectiveness of school practices.	3.23	0.71	84%	.76
ANOVA				.02*
*New ( $n = 54$ )	3.38	0.70		
*Experienced ( $n = 40$ )	2.97	0.64		
Veteran ( $n = 82$ )	3.23	0.71		
28. Principal works to create sense of community.	3.19	0.77	79%	.21
29. Principal encourages parent involvement.	3.21	0.7	84%	.56

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 7 displayed that there was a very high level of agreement (84%-92%) regarding the utilization of assessment practices in the respective schools. The mean scores

ranged from ( $\mu = 3.27$ ) to ( $\mu = 3.51$ ), indicating that the responses were closer to agreement than strongly agree with the exception of the response regarding a variety of assessment strategies used, which received the highest mean in the group and the highest percentage of agreement. A t-test analysis between urban teachers and rural teacher revealed that there were no significant differences in any of the assessment practices between the rural and urban teachers The ANOVA test conducted for the three levels of teacher experience found no significant differences in the assessment practices section.

Table 7. Assessment

	Mean	SD	Level of Agreement	Statistics p-value
30. School-wide commitment to assessment.	3.46	0.65	92%	.98
31. Variety of assessment strategies used.	3.51	0.61	94%	.59
32. Data collected to guide instruction.	3.28	0.71	85%	.87
33. Systematic analysis of student data.	3.27	0.72	84%	.66
34. On-going monitoring of student learning.	3.39	0.68	89%	.64

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 8 indicates that there was a relatively high level of agreement (79%-97%) in the questions referring to the effectiveness of teachers in the respective schools. Ninety-seven (97%) of the respondents agreed that teachers at their respective schools were committed to learning, which was the highest for this section. The mean score of 3.5 indicated a high level of agreement among the respondents. Teachers ability to effectively teach the most difficult students received the lowest mean score (2.97), which indicated that there was the least amount of agreement within this category. A t-test analysis

revealed that there were no significant differences amongst rural and urban teachers in any of the survey items regarding effective teachers, with the exception of the item referring to staff establishing caring relationships ( $p = .03$ ). Urban teachers ( $n = 99$ ) indicated a higher level of agreement than rural teachers ( $n = 77$ ) for staff members' ability to establish caring relationships with students. An ANOVA test conducted revealed that there were no statistical differences between the three groups of teachers (new, experienced, and veteran).

Table 8. Effective Teachers

	Mean	SD	Level of Agreement	Statistics p-value
35. Teachers are committed to learning.	3.5	0.56	97%	.11
36. Staff members establish caring relationships.	3.32	0.66	89%	.02*
Urban ( $n = 99$ )	3.42	0.65		
Rural ( $n = 77$ )	3.20	0.66		
37. Teachers effectively teach most difficult students.	2.97	0.65	79%	.37
38. Teachers believe instruction determines students' success.	3.14	0.58	89%	.25

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 9 displays the data pertaining to having a guaranteed and viable curriculum revealing a mean score range from ( $\mu = 2.96$ ) to ( $\mu = 3.33$ ). The item with the highest level of agreement was the presence of a written curriculum linked to state standards (90%). Having established checkpoints to assure learning is occurring received the lowest level of agreement (79%). This item also had the lowest mean score (2.97) within the category of guaranteed and viable curriculum. The t-test analysis revealed that there was no statistical difference between the rural teachers and urban teachers in response to the items regarding

a guaranteed and viable curriculum. An ANOVA test conducted also revealed that none of the items showed a statistical difference at a .05 alpha level.

Table 9. Guaranteed and Viable Curriculum

	Mean	SD	Level of Agreement	Statistics p-value
39. Written curriculum linked to state standards.	3.33	0.64	90%	.81
40. Curriculum articulated vertically and horizontally.	3.10	0.66	84%	.72
41. Teachers are clear about what students should know.	3.17	0.67	85%	.97
42. Checkpoints developed to assure learning is occurring.	2.96	0.74	79%	.34

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 10 presents the data for survey items in regards to a collaborative school environment. Over 68% agreed with the survey items in this section, ranging from 68% to 74%, yet this school-based practice as a whole has the lowest level of agreement amongst the ten practices. The mean scores, ranging from ( $\mu = 2.84$ ) to ( $\mu = 2.99$ ) indicated that the responses were closer to agreement than strongly agreed in all of the items. Employing a t-test, there was no statistical differences in any of the collaborative school environment practices between rural and urban teachers.

An ANOVA test conducted for the three teacher groups (new teachers, experienced teachers, and veteran) revealed that there was statistical difference in the level of agreement between the experienced and veteran teachers ( $p = .014$ ) regarding staff feeling responsible to help each other do their best. Of the 176 responses, veteran teachers ( $n = 82$ ) had a higher level of agreement ( $\mu = 3.13$ ) compared to the experienced teachers ( $n = 40$ ,  $\mu =$

2.77). There were no statistical differences revealed for the remainder of the collaborative school environment practices.

Table 10. Collaborative School Environment

	Mean	SD	Level of Agreement	Statistics p-value
43. Professional learning communities established.	2.85	0.75	68%	.36
44. Staff work collaboratively to analyze and act upon data.	2.99	0.72	74%	.67
45. Support mechanisms in place to facilitate successful collaboration.	2.84	0.72	68%	.77
46. Staff members feel responsible to help each other do their best.	2.96	0.76	69%	.17
ANOVA				.01*
New (n = 54)	2.83	.78		
**Experienced (n = 40)	2.77	0.81		
**Veteran (n = 82)	3.13	0.68		

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 11 presents the data regarding the school-based factors of professional development. The professional development factor had the lowest levels of agreement among all of the factors. Staff members engaged in rigorous studies of what they teach received the lowest mean score ( $\mu = 2.68$ ) amongst the ten school-based practices, which revealed that there was the least amount of agreement. Professional development linked to teaching and achievement ( $\mu = 3.08$ ) and professional development reflecting research-based instruction ( $\mu = 3.08$ ) indicated that respondents agreed that their school participated in these types of professional development experiences. The standard deviation attested to this level of agreement.

The t-test revealed that there were two items that showed a statistical difference between rural and urban teachers. The item regarding professional development linked to



teaching and achievement was at a .0002 with urban teachers indicating a higher level of agreement than rural teachers. There was also a significant difference for professional development reflecting research-based instruction ( $p = .002$ ) with rural teacher respondents ( $n = 77$ ) having a higher level of agreement ( $t=.002$ ) than urban teachers ( $n = 99$ ). There were no significant differences among rural and urban teachers in the remaining survey items within the professional development factor.

Table 11 also presents the findings of the ANOVA test conducted for the three groups of teachers to determine if there was a significant difference between the three teacher groups. The data from the ANOVA revealed a significant difference ( $p = .04$ ) in

Table 11. Professional Development

	Mean	SD	Level of Agreement	Statistics p-value
47. Professional development linked to teaching and achievement.	3.08	0.60	86%	.0002***
Urban (n = 99)	2.94	0.55		
Rural (n = 77)	3.27	0.62		
48. Staff members are engaged in rigorous studies of what they teach.	2.68	0.68	57%	.17
ANOVA				.04*
*New (n = 54)	2.83	0.69		
*Experienced (n= 40)	2.48	0.81		
Veteran (n = 82)	2.70	.72		
49. Professional development reflects research-based instruction.	3.08	0.61	85%	.002**
Urban (n = 99 )	2.95	0.60		
Rural (n = 77)	3.23	0.58		
ANOVA				.007**
**New (n = 54) <sup>a</sup>	3.20	0.56		
**Experienced (n = 40) <sup>ab</sup>	2.83	0.64		
**Veteran (n = 82) <sup>b</sup>	3.12	0.59		

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Note: Numbers in the same row followed by the same superscript are significantly different from one another at the level indicated by the \*

agreement between the new teachers and the experienced teachers with regards to staff members being engaged in rigorous studies of what they teach. The new teachers ( $n = 54$ ) had a higher level of agreement ( $\mu = 2.93$ ) compared to the experienced teachers ( $\mu = 2.48$ ). The survey item, professional development reflecting research-based instruction, also revealed a significant difference in agreement between new and experienced teachers, and experienced and veteran teachers ( $p = .007$ ). The new teachers ( $n = 54$ ) had a higher level of agreement ( $\mu = 3.20$ ) compared to experienced teachers ( $n = 40$ ,  $\mu = 2.83$ ). This survey item also revealed a significant difference between experienced teachers and veteran teachers with veteran teachers having a higher level of agreement ( $\mu = 3.12$ ) than experienced teachers ( $\mu = 2.83$ ).

Data analysis in Table 12 showed that the five items regarding parental involvement had a high level of agreement with means ranging from ( $\mu = 2.74$ ) to ( $\mu = 3.15$ ). The responses were closer to agreement than strongly agree with the exception of opportunities for parents to learn being provided, which received the lowest mean in the group ( $\mu = 2.74$ ) and the lowest level of agreement (64%). The highest level of agreement was among the survey item regarding the school collaborating with social services (91%).

A t-test between rural and urban teachers revealed that there were two items in this section that revealed statistical significance at a .05 alpha level. The item regarding the school collaborating with social services was at a  $p = .006$  and the opportunities for parent to learn revealed a  $p = .02$ . had a higher level of agreement ( $t = .0063$ ) than rural teachers ( $n = 77$ ) regarding the school collaborating with social services. There was also a statistical difference found between urban ( $n = 99$ ) and rural teachers ( $n = 77$ ) in the survey item of

providing opportunities for parents to learn with urban teachers having a higher level of agreement ( $t = .026$ ).

Table 12 also presents the analysis of the ANOVA test to determine if there was a significant difference between any of the groups (new, experienced, and veteran). The ANOVA revealed a significant difference in agreement between the experienced and veteran teachers ( $p = .04$ ) regarding teachers understanding cultural backgrounds, values, and attitudes. The veteran teachers ( $n = 82$ ) had a higher level of agreement ( $\mu = 3.05$ ) than the experienced teachers ( $n = 40$ ,  $\mu = 2.80$ ). The ANOVA analysis for the remainder of the items revealed that none of them showed statistical significant difference at .05 alpha level.

Table 12. Parental Involvement

	Mean	SD	Level of Agreement	Statistics p-value
50. Teachers reach out to parents to engage them in student learning.	3.05	0.54	88%	.89
51. Teachers understand cultural backgrounds, values, and attitudes.	2.98	0.52	85%	.83
ANOVA				.04*
New (n = 54)	3.00	0.58		
*Experienced (n = 40)	3.05	0.49		
*Veteran (n = 82)	2.80	0.46		
52. School collaborates with social services.	3.15	0.55	91%	.006**
Urban (n = 99 )	3.25	0.55		
Rural (n = 77)	3.02	0.51		
53. Teachers keep parents informed of classroom activities.	3.04	0.67	81%	.17
54. Opportunities for parents to learn are provided.	2.74	0.68	64%	.02*
Urban (n = 99 )	2.84	0.62		
Rural (n = 77)	2.61	0.73		

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 13 presents the findings of the data regarding the school-based factor of classroom management. Over 83% of the respondents believed their school practiced classroom management strategies found to be effective for schools with students living in poverty. Three of the four components showed 90% or higher level of agreement. The mean scores ranged from ( $\mu = 3.10$ ) to ( $\mu = 3.28$ ), indicating that the responses were closer to agreement than strongly agree. The standard deviation attested to this agreement. The analysis from the t-test revealed that there were no significant differences among rural and urban teachers in any of the survey items regarding classroom management.

An ANOVA analysis revealed a statistical difference in the level of agreement between the new teachers and the experienced teachers ( $p = .003$ ) regarding the establishment of routines to minimize transition time. There were other survey items in this section that revealed statistical significance at a .05 alpha level.

Table 13. Classroom Management

	Mean	SD	Level of Agreement	Statistics p-value
55. Classroom rules have been developed and posted.	3.25	0.66	90%	.31
56. Routines have been established to minimize transition time.	3.34	0.56	95%	.34
ANOVA				.01*
*New (n = 54)	3.51	0.58		
*Experienced (n = 40)	3.15	0.58		
Veteran (n = 82)	3.28	.53		
57. Pace of instruction is rapid with engagement of all students.	3.12	0.65	84%	.11
58. A combination of punishment and positive reinforcement is used.	3.27	0.60	92%	.47

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

The data in Table 14 revealed a high level of agreement regarding additional instructional time provided in elementary schools with the exception of the availability of a free preschool program as indicated by 63% level of agreement. The t-test analysis between rural and urban teachers revealed that that there was a significant difference ( $p = .0008$ )

Table 14. Additional Instructional Time

	Mean	SD	Level of Agreement	Statistics p-value
59. Instructional time is protected with uninterrupted blocks of time.	3.13	0.74	82%	.99
ANOVA				.003**
**New (n = 54) <sup>ab</sup>	3.42	0.70		
**Experienced (n = 40) <sup>b</sup>	2.95	0.76		
**Veteran (n = 82) <sup>a</sup>	3.04	0.73		
60. Extended-day programs are available.	3.10	0.88	79%	.15
61. Summer school programs are available.	3.28	0.75	87%	.0008***
Urban (n = 99)	3.44	0.59		
Rural (n = 77)	3.06	0.88		
ANOVA				.0003***
***New (n = 54) <sup>ab</sup>	3.61	0.60		
***Experienced (n = 40) <sup>a</sup>	3.18	0.78		
***Veteran (n = 82) <sup>b</sup>	3.11	0.77		
62. Full-day, every day kindergarten is available.	3.66	0.49	92%	.86
ANOVA				.02*
*New (n = 54)	3.80	0.41		
*Experienced (n = 40)	3.51	0.56		
Veteran (n = 82)	3.07	0.88		
63. A free preschool program is available.	2.85	0.96	63%	.14
ANOVA				.003**
New (n = 54)	2.79	1.04		
** Experienced (n = 40)	2.45	0.88		
**Veteran (n = 82)	3.07	0.88		

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Note: Numbers in the same row followed by the same superscript are significantly different from one another at the level indicated by the \*

regarding the availability of summer school programs with an academic focus. The urban teachers ( $n = 99$ ) had a higher level of agreement than the rural teachers ( $n = 77$ ) in this survey item.

An ANOVA conducted for the levels of experience showed a significant differences in the level of agreement between new teachers, experienced teachers, and veteran teachers in all of the additional instructional time survey items except one. The survey item regarding availability of summer school programs with an academic focus was the most significant ( $p = .0003$ ) between new/experienced and experienced/veteran teachers. Instructional time protected with uninterrupted blocks of time revealed a significant difference ( $p = .003$ ) between new/experienced and new/veteran teachers. The survey item regarding the availability of full-day, every day kindergarten indicated a significant difference ( $p = .018$ ) between new and experienced ones. The last survey item in this section revealing a statistical difference was the availability of a free preschool program ( $p = .002$ ) between experienced and veteran teachers.

#### Qualitative Comments Summary

Respondents were given the opportunity to provide additional comments. There were 79 comments for the open-ended question regarding the school-based practices having the most influence on student achievement. Overall, there were three main themes that emerged from their comments. The first theme and one receiving the most comments revolved around reading instruction. Many of the schools had begun using a guided reading approach, which utilized leveled reading for small groups. One teacher commented, "The struggling readers have small group instruction at their level and the students who are reading above grade level are also challenged with reading material that is at their

instructional level.” Another aspect revealed within the reading theme was the use of a 90-minute uninterrupted reading block for all students. A comment from one teacher was, “When we have an uninterrupted block for reading, the importance of learning to read is stressed to all, including teachers, students, and parents.”

The second theme that emerged from this section was teacher effectiveness. Having high expectations for learners was mentioned most often within this theme. One teacher commented, “The teachers at our school have high expectations for students and hold them accountable, yet we show that we truly care about them.” Another teacher said, “Teachers strive to push students to be the best they can be.” Building relationships with students was also commented frequently within this theme. As one teacher put it, “Our work to continuously build relationships with students has been a key to our success.” Another factor within the teacher effectiveness theme was the willingness of teachers to work together to meet the need of all students. Collaboration through Professional Learning Communities was commented by a number of teachers, “Our staff has a good attitude and works together well in professional learning communities.”

The third theme in this section was intervention strategies that the school had implemented for increased achievement. The use of assessments to drive instruction was indicated as the one of the school-based practices having the most influence on student achievement most frequently. One teacher said, “The use of assessments to drive instruction has been an important component for student achievement. Another comment that summed up similar sentiments was, “Looking at students’ test scores to see what we can do to help build upon strengths and improve their weaknesses has helped tremendously in our school.”

There were two themes ascertained from 38 comments in Section 2 of the open-ended responses. When provided the opportunity to share general comments, the most comments for this section referred to the necessity for collaboration among teachers and the principal. One teacher enthusiastically wrote, "Our principal and the staff work together to bring learning and a feeling of success to each and every child! Another claimed, "The team approach has been key for increased student achievement." Other comments seemed to focus on the need for additional collaboration and that "even though they were moving in the right direction, all teachers needed to be willing to collaborate for the good of the student."

Another theme that surfaced was regarding the benefits and need for additional professional development. One respondent said, "We need to continue professional development for understanding poverty and how to use the data for school improvement." Another commented "more professional development on best practices and meeting in professional learning communities is needed."

There were a variety of comments in this section of the survey with the overall sentiment of positive expressions regarding their school and their feelings about being educators. One respondent shared, "I think we all try to look at the needs of each student from all angles (academic, behavioral, social, physical) and enlist the help of all to meet these needs. Another expressed, "We do our best with the resources we have." A number of respondents expressed gratitude for being invited to participate in this study and some comments were words of encouragement to the researcher, "Good luck in this study!"



## CHAPTER V.

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Introduction

This chapter highlights the purpose of the study and the research questions, important findings in the literature review, and the findings of this study. A summary of each research question was addressed by examining the association between the findings from previous literature and the findings of this study. Additionally, it presents the conclusions and recommendations of this study. The chapter concludes with recommendations of this study.

#### Purpose

The purpose of this descriptive study was to investigate the interventions implemented for increased student achievement in elementary schools with high-poverty enrollments. The literature review presented information on levels of poverty, the factors of poverty that increase the risk of lower academic achievement, a review of the educational initiatives that have been implemented by the federal government to overcome poverty, and school-based practices that increase student achievement for high-poverty schools.

#### Research Questions

The research questions guiding this study were:

1. What factors are associated with lower academic achievement for children living in poverty?
2. What school-based practices are perceived to help increase the academic achievement of children living in poverty?

The problem statement for this study indicated that elementary school teachers must know and understand the instructional strategies, interventions, best practices, and environments to ensure that students who live in poverty learn and achieve acceptable standards of academic excellence and school success. With the goal of narrowing the achievement gap for poor and minority students and increasing achievement so that schools accomplish adequate yearly progress (AYP) on the yearly assessments required for NCLB, it has become an even more important issue.

### Research Question One

#### *Summary*

Research question one examined the factors that are associated with lower academic achievement for children living in poverty. The literature revealed that children living in poverty have an increased risk to lower academic achievement compared to middle- and high-income children (Duncan, Brooks-Gunn, & Klebanov, 1994). Studies with older middle school students found that economic advantage facilitated cognitive abilities as identified by improved school performance, whereas economic disadvantage impaired intellectual functioning (Conger & Elder, 1994). Research by Greene & Forster (2004) identified factors that had a documented relationship to student achievement and placed students at risk of failing in school. They referred to these factors as benchmarks of “teachability”, contending that the more factors a particular student had, the more confounding the challenges of effective teaching and learning.

Literature revealed a number of factors affecting school achievement were identified prior to students’ first year of formal schooling such as poor pre- and perinatal health care, prenatal exposure to drugs, perinatal complications, and poor nutritional status.

Further, literature indicated that health issues, such as asthma and ear infections, coupled with the lack of treatment because of the likelihood of no health insurance, accounted for as much as 13% to 20% of the difference in IQ between poor and nonpoor four-year-olds (Korenman & Miller, 1997).

Other factors found to have a negative effect on learning included family circumstances such as single parenting and neglect and/or physical abuse. Lack of communication, less cognitive stimulation, extended time of television viewing, housing conditions, living in poor neighborhoods, and less access to quality daycare were also factors affecting student achievement. Factors based on school experiences were lower per-pupil funding, conditions of schools, unqualified teachers, unchallenging academics, lower achievement expectations, and ineffective classroom practices. High student mobility, lack of family involvement, and having a negative self-status were factors occurring during a child's school years that were found to have a negative effect on learning.

### *Conclusions*

The literature review and findings of this study have been compared and thoughtfully synthesized to ascertain the conclusions of this research. Many of the findings in this research supported what was cited in the literature review.

The data gathered from this section of the survey instrument indicated that lack of parenting skills was the factor that teachers reported most often as affecting student achievement. Literature also suggests that this factor has a profound effect on student achievement as children rely on their parents to respond to their basic needs and provide emotional support, both important for child development and learning. Elementary teachers are able to see parents "in action" with their children on a more frequent basis than middle

school or high school teachers. They observe interactions of parents and their children and see the results of parents who provide support to their children, academically, behaviorally, physically, and emotionally. Children at the elementary level are still heavily influenced by their parents and reflect parenting styles. This may be the reason that teachers identified this factor as having an effect most frequently.

The second factor receiving the most responses of having an effect on student achievement was attendance issues. Literature suggests that there is a statistically significant relationship between student attendance and academic achievement. Teachers at the elementary level work with students for approximately six hours each day and see the effects of children not being in school. It takes special efforts from teachers and students to “catch up” what an elementary child misses each day or hour they are absent from school.

According to the data analysis, over 90% of the respondents reported that nine other factors affected student achievement at least to some extent. Some of these factors can be classified as parenting skills: lack of parent involvement, poor nutrition, viewing violence on TV, neglect/abuse issues, lack of preschool, and low self-esteem. The remaining factors identified by teachers as affecting student achievement can be classified as social/community issues: lack of quality childcare, living in low-income housing, high mobility rates. Literature also suggested that these factors have an effect on learning to varying degrees.

There were three factors, low birth weight, no prenatal care, and poor housing conditions that over 50% of the teachers responded to having some effect on learning, but they also received the most responses as having no basis to judge. These factors are not clearly observable and teachers would only know about these factors for specific children if

they had specifically learned this through parent communication or had read a social history that had been prepared for a child's Individual Education Plan.

### *Recommendations*

This study showed that teachers working in elementary schools with over 40% poverty did have some knowledge about their students' backgrounds and that factors of poverty had some effect on student achievement. Data analysis, as well as the literature review, from this study led to the following recommendations:

1. Professional development for teachers at all levels regarding the understanding of poverty and the life conditions that adversely affect student achievement is important. The professional development must go beyond awareness of the factors affecting student achievement to an understanding of poverty so that a framework for building resources for students are at the forefront, rather than labeling and blaming.
2. Teacher preparation programs should make a concentrated effort to dedicate a portion of a course or a full course to learning about poverty and the effects it can have on student learning.
3. Schools should work with other agencies and organizations in the community to provide parenting workshops. It is important that these workshops be held at times most appropriate for parents. Other considerations should be daycare, transportation, and meals so that families living in poverty are more able to attend.
4. Schools with a high number of students living in poverty would benefit from developing attendance plans to promote attendance to school every day. Close

communication with parents should be a major component of these attendance plans with the goal of helping parents get their child to school each day. Building positive relationships with parents would be another important component of an attendance plan.

5. Additional research should be done concerning the factors of poverty for families in rural areas and larger communities in states such as North Dakota with a large area per capita to learn about additional factors of poverty that families and children may be experiencing. This could assist with understanding and planning additional supports for increased achievement.

## Research Question Two

### *Summary*

Research question two examined the school-based practices that have been identified as helping increase the academic achievement of children living in poverty. Several researchers have studied the characteristics of high-performing, high-poverty schools to identify frameworks for other schools and educators to utilize in their efforts to increase student achievement, lessen the gap between poor students and non-poor students, and meet the goals set forth by NCLB.

Based on the assertion that effective schools produce results that almost entirely overcome the effects of student background, Marzano (2003) organized 11 factors that influence student achievement into three general categories: (a) school-level factors, (b) teacher-level factors, and (c) student-level factors. Shannon and Bylsma (2007) distilled nine characteristics found most often in high-poverty, high-performing schools including influence student academic achievement: (a) shared focus, (b) high expectations, (c)

research, (d) collaboration, (e) curriculum and assessments aligned standards, (f) monitoring of learning, (g) professional development, (h) supportive learning environment, and (i) family involvement.

Research by Barr and Parrett (2007) identified eight specific strategies and practices found in successful high-performing, high-poverty schools: (a) leadership, (b) parent involvement, (c) high expectations, (d) target low-performing students and schools, particularly for reading, (e) align, monitor, and manage the curriculum, (f) data and assessment literacy, (g) build and sustain instructional capacity, (h) time and transitions.

Hayes (2008), of the Vermont Department of Education, found that seven key characteristics surface as common across studies of high-achieving, high-poverty schools: (a) high expectations, (b) focus on student achievement, (c) frequent assessments, (d) additional support, (e) collaboration, (f) effective leadership, and (g) parent involvement

This section of the survey confirmed that there is no single school-based practice that can ensure high student performance in a high-poverty school. Of the ten categories of school-based practices, there was agreement with many of the specific practices within all categories. The three school based practices with the highest levels of agreement included: high expectations for learning, assessment, and classroom management. The three school-based practices with the lowest level of agreement included: the availability of a free preschool program, opportunities provided for parent learning, and staff members being engaged in rigorous studies of what they teach.

There were three main themes that emerged from the first open comment question in this section. One common theme that was expressed in various ways revolved around reading instruction. Another common theme suggested was the high expectations for

learners, a reflection of teacher effectiveness. Many comments in this section acknowledged that many different intervention strategies had been implemented at their school for increased student achievement.

One of the main sentiments expressed in the general comments portion in this section was that professional development had been important and additional professional was needed. The respondents also cited the necessity for collaboration among all staff, including the principal.

### *Conclusions*

The literature review and findings of this research question have been thoughtfully synthesized to ascertain the conclusions for research. Many of the findings supported what was cited in the literature review. There were also additional findings that revealed different or more specific school-based factors impacting student achievement at the high-performing, high-poverty elementary schools in North Dakota.

Data analysis confirmed that many school-based practices are being implemented in schools for increased student achievement. Despite the fact that there are a great many small schools with fewer resources for professional development and various programs, high-performing, high-poverty North Dakota Elementary Schools utilize a great number of school-based practices reflective of the literature review. While teachers may have responded favorably to many of the survey items, their schools are high poverty, high-performing and therefore, may very well be implementing the best practices reflected in research.

The category of high expectations had a high level of agreement, demonstrating that elementary teachers in these high-performing schools hold the attitude that “all children



can learn”. The category of assessment also had a high level of agreement among the specific practices. This may be due to the many professional development activities provided in the state on the topic of data-driven decision making. There has also been a conscious effort throughout the state to utilize assessments for making instruction decisions. With the increased level of accountability, schools and teachers are using assessments more frequently to not only determine achievement, but also identify needs and progress monitor.

The lowest level of agreement among school-based practices was within the collaborative school environment category. Traditionally, elementary teachers have worked on an “individual basis” to provide instruction to their students. Collaboration and Professional Learning Communities (PLC) have been a relatively new concept in the education field. More schools are utilizing PLCs, yet there are many schools in the state that have not had the training for this collegial interchange, or have not embraced the concept of collaboration. The necessity for collaboration among all staff was a common theme in the open ended comment section of the survey.

Staff members’ engagement in sustained, intellectually rigorous study of what they teach and how they teach it had a lower level of agreement. As elementary teachers in the state of North Dakota, there is not an abundance of opportunities for “rigorous” studies of the elementary curriculums. Summer workshops are most often the choice of professional development, which do not have the characteristics most people would identify would rigorous studies. Additional professional development was a common theme in the open ended comment section of the survey also.

Opportunities for parents to learn and free preschool had lower levels of agreement. There was also a statistical difference in the level of agreement in both of these specific practices, between urban and rural, and the three groups of teachers classified by years of experience, respectively. With fewer resources in a small community, having fewer opportunities for parent trainings is inevitable. Veteran teachers, who indicated the highest level of agreement, would most likely know about various opportunities for preschool in the community.

### *Recommendations*

This study showed that high-performing schools with 40% or more students living in poverty utilized a great many of the best practices as described in the literature review. Data analysis, as well as the literature review, from this study led to the following recommendations:

The following recommendations pertain to the findings of this study:

1. Professional development regarding best practices for schools serving student in poverty should be a priority for the state Title I Office. Site visits to schools that are effectively teaching students living in poverty could be provided and funded by the state title I Office as an opportunity for professional development.
2. Colleges offering continuing education classes should provide opportunities for teachers to participate in professional development and/or graduate level college courses regarding best practices for teaching students living in poverty.

3. Schools with high poverty status should be provided additional resources to develop Professional Learning Communities for increased collaboration within the school and/or district.
4. The North Dakota State Legislature should fully fund research-based full day, every-day preschool programs, especially for children living in poverty.

#### Recommendations for Further Study

Based on the findings and conclusions of this research study, the following areas are recommended for further study:

1. This study targeted only teachers in elementary schools making AYP. Further research could be conducted to compare schools making AYP and schools that are not making AYP.
2. This study was a quantitative survey that gathered a broad spectrum of data. The finding supported the existing literature regarding the education of students living in poverty. Future studies may include conducting focus groups with teachers in schools with 40% or more of poverty to more thoroughly explore the findings of this study.
3. This study only surveyed teachers from elementary schools in schools with 40% or more of poverty. Future studies may include the principals on these elementary schools to gain a leadership perspective.
4. This study only surveyed elementary teachers from North Dakota. Future studies may include a broader sample of teachers, outside of North Dakota, to make the findings more generalizable to elementary education across the country.

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## APPENDIX A. LITERARY FRAMEWORK

Research Question #1 What factors are associated with lower academic achievement for children living in poverty?	
Aggregated Themes	Citations
1. Poor pre-and perinatal health care	Duncan & Brooks-Gunn (1997) Frank, Strobino, Salkever, & Jackson (1992) Hawley & Disney (1992) Kaiser & Delany (1996)
2. Health issues: asthma & ear infections	Berliner (2005) Books (2000) Goldstein (1990) National Institutes of Health (1996)
3. Low birth weight	Brooks-Gunn & Duncan (1997). Litt, Taylor, Klein, & Hack (2005)
4. Lead in blood	Crooks (1995) Needleman (1990) Needleman, Schell, Bellinger, Leviton, & Alred (1990)
5. Poor nutritional status	Center on Hunger, Poverty, and Nutrition Policy (1995) Korenman & Miller (1997) Miller & Korenman (1994)
6. Single parenting	Entwisle & Alexander (1996)
7. Lack of parenting skills	Evans (2004) Fontes (2005) Gershoff (2008) Harnish, Dodge, & Valente (1995) Sampson & Laub (1994)
8. Neglect and physical abuse	Conger & Elder (1994) Kendall-Tackett & Eckenrode (1996)
9. Lack of communication	Barr & Parrett (2007) Davison et al. (2004) Hart & Risley (1995) Oller, Eilers, Steffens, Lynch, & Urbano (1994) Rothstein (2008)
10. Less cognitive stimulation	Coley (2002) Duncan & Brooks-Gunn (1997) Federal Interagency Forum on Child & Family Statistics (2000)
11. Watched more television	Comstock & Paik (1991) Vandewater & Bickham (2004) Huston & Wright (1997)

12. Poor neighborhoods	Bracey (2002) Brooks-Gunn et al.(1994) Entwisle, Alexander, & Olson (1997) Peeples & Loeber (1994) Schwab-Stone et al. (1999)
13. Housing conditions	Barr & Parrett (2007) Bashir (2002) Kozol (1995)
14. Less access to quality day care	Barnett (2008) Greenbert, Dutta-Gupta, & Minoff (2007) Leventhal & Brooks-Gunn (2003) McLoed (2009) Slavin (1998)
15. Lower per-pupil funding	Barr & Parrett (2007) Education Trust (2006) American Civil Liberties Union (2000)
16. Conditions of schools	Darling-Hammond (2004) Quartz (2003)
17. Neighborhood violence	Duncan & Brooks-Gunn (1997)
18. Unqualified teachers	Barr & Parrett (2007) Darling-Hammond (1994) Fenwick (2001) Hanushek, Kain, & Rivkin (2004) Haycock (2001) Jepsen & Rivkin (2002) National Center for Education Statistics (2000) Thernstrom & Thernstrom (2003) U.S. Department of Education (1995)
19. Unchallenging academics	Gamoran (2000) McKinney, Flenner, Frazier, & Abrams (2006) Schmoker (2006)
20. Lower achievement expectations	Barr & Parrett (2007) Brookover (1985) Haycock (2001) McLoyd (1998)
21. Ineffective classroom practices	Barr & Parrett (2007) Haberman (2005) Knapp, Shields, & Turnbull (1995) Schmoker (2006)
19. High student mobility	Biernat & Jax, (2000) Kerbow (1996) Pellino (2007) U.S. Government Accounting Office (1994)
20. Lack of family involvement in education	Barton (2004) Hoover-Dempsey & Sandler (1997)

	Lareau (1989) McCarthy (2000) Neito (1999)
21. Negative self-status	Pellino (2007)

**Research Question #2**  
**What school-based practices perceived to help increase the academic achievement of children living in poverty?**

Aggregated Themes	Citations
1. High expectations for learners	Bauer (1997) Covey (1989) Good & Brophy (2000) Milner, Flowers, & Moore (2003) Payne (2008) Pellino (2007)
2. Strong leadership	Barr & Parrett (2007) Blasé & Blasé (2001) Cawelti (2000) Carter (2000) Center for Public Education (2007) Kannapel & Clements (2005)
3. Assessment procedures with data-driven decision making	Barr & Parrett (2007) Blankstein (2004) McGee (2004) Massell (2000) McGee (2004) Nathan & Johnson (2000) Stiggins (2001) Stiggins, Arter, Chappuis, & Chappuis (2004) Stiggins & Chappuis (2006)
4. Effective teachers	Benard (2003) Brophy (1982 ) Cawelti (2000) Danielson (2002) Haycock (2001) Marzano (1998) Marzano (2003) Wright, Horn, & Sanders (1997)
5. Guaranteed and viable curriculum linked to standards	Barr & Parrett (2007) Danielson (2002) English & Stephy (2001) Schmoker (2006)

6. Collaborative school environment: PLCs	Barr & Parrett (2007) Danielson (2002) DuFour (2001) DuFour, Eaker, & DuFour (2005) Schaffer & Thomson (1992) Schmoker (2006) Symonds (2004)
7. High-quality professional development	Barth et al. (1999) Center for Public Education (2007) Darling-Hammond & McLaughlin (1995) Garet et al. (2001) McGee (2004) Sparks & Hirsch (1999) Wilson & Berne (1999)
8. Parents as partners	Barr & Parrett (2007) Barth et al. (1999) Blasé, Blasé, & Phillips (2010) Cummins (1993) Epstein (1995) Henderson & Beria (1994) Jesse, Davis, & Pokorny (2004) McGee, 2004
9. Effective classroom management	Chenoweth (2008) Evertson (1989) Kounin (1983) Marzano (2003) Payne (2001) Stage & Quiroz (1997) Wang, Haertel, & Walberg (1993)
10. Additional instruction time	Barnett (2008) Barr & Parrett (2007) Chenoweth (2008) Marzano (2003)

APPENDIX B. SURVEY INSTRUMENT

**INCREASING THE ACHIEVEMENT OF ECONOMICALLY DISADVANTAGED STUDENTS  
IN HIGH POVERTY SCHOOLS**

**Purpose:** *The purpose of this study is to investigate the interventions implemented for increased student achievement in elementary schools with high-poverty enrollments.*

*The research questions guiding this study are the following:*

1. What factors are associated with lower academic achievement for children living in poverty?
2. What school-based practices help increase the academic achievement of children living in poverty?

**SECTION 1: Demographic Information:**

1. School District: Size: Please choose one
  - Rural (599 or less)
  - Urban (600 or more)
  
2. Number of Years at this School: Please choose one
  - 0-5 Years
  - 6-10 Years
  - 11 or More Years
  
3. Have you participated in professional development regarding the understanding of children living in poverty?
  - Yes
  - No

**SECTION 2: Consider the students who attend your school. To what extent do these factors affect the learning achievement of the students in your school?**

	Not At All	To Some Extent	High Extent	Very High Extent	No Basis to Judge
4. Little or no prenatal care for pregnant mothers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Health issues such as asthma or ear infections in children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Low birth weight or premature birth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Families living in older housing – built before 1944 with little or no renovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Poor nutrition for children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Lack of parenting skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Instances of neglect and/or abuse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. High mobility rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Attendance issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Students live in areas of low income housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Students live in poor housing conditions – dilapidated or inadequate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Reports of watching television with violence or unsuitable for age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Reports of violence in home or neighborhood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Single parent family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Lack of quality childcare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Student did not attend preschool with academic focus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Lack of parent involvement in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Student demonstrates low self esteem or negative self status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**SECTION 3: Following are a number of statements describing school-based practices. Please indicate the extent to which you agree or disagree with the following statements about your school.**

**I. High Expectations**

	Strongly Disagree	Disagree	Agree	Strongly Agree
22. Staff members hold high expectations for all students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Staff members develop positive personal relationships with their students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Students are well aware of the learning expectations of this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**II. Leadership**

	Strongly Disagree	Disagree	Agree	Strongly Agree
25. The principal is knowledgeable about standards and curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. The principal sets high expectations for student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. The principal monitors the effectiveness of school practices and their impact on student learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. The principal works to create a sense of community in this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. The principal encourages parent involvement in students' learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**III. Assessment**

	Strongly Disagree	Disagree	Agree	Strongly Agree
30. There is a school-wide commitment to assessment at this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. A variety of assessment strategies are used to measure student progress in this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Teachers in this school collect and use data to guide their instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. This school is engaged in systematic analysis of student performance data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. This school uses on-going progress monitoring of student learning to determine which students need additional support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**IV. Effective Teachers**

	Strongly Disagree	Disagree	Agree	Strongly Agree
35. Teachers in this school are committed to teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Staff members work to establish caring relationships between themselves and students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Teachers in this school are able to successfully teach the most difficult students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Teachers in this school believe that instruction determines students' academic success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**V. Guaranteed and Viable Curriculum**

	Strongly Disagree	Disagree	Agree	Strongly Agree
39. There is a written curriculum for each subject and level linked to state standards.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Efforts have been made to ensure that the curriculum is articulated vertically and horizontally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. Teachers are clear about what students are expected to know.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Checkpoints have been developed to assure that learning of content is occurring.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**VI. Collaborative School Environment**

	Strongly Disagree	Disagree	Agree	Strongly Agree
43. Professional learning communities have been established for staff to collaborate regularly for student achievement and instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. Staff work together to collaboratively analyze and act upon data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. There are support mechanisms in place to facilitate successful collaboration amongst staff.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. Staff feel responsible to help each other do their best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**VII. Professional Development**

	Strongly Disagree	Disagree	Agree	Strongly Agree
47. Professional development is directly linked to improvement in teaching that increases student achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. Staff members are engaged in sustained, intellectually rigorous study of what they teach and how they teach it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. The professional development at this school has been reflected on research-based instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**VIII. Parental Involvement**

	Strongly Disagree	Disagree	Agree	Strongly Agree
50. Teachers at this school reach out to parents to engage them in their student's learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. Teachers at this school understand families' cultural backgrounds, values, and attitudes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. If a student or student's family needs help, the school collaborates with social service agencies to see that they get help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Teachers at this school keep parents informed of what is going on in the classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Opportunities for parents to learn are provided.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**IX. Classroom Management**

	Strongly Disagree	Disagree	Agree	Strongly Agree
55. Classroom rules have been developed in classrooms and they are posted on a wall or bulletin board in classrooms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Routines have been established in classrooms to minimize the amount of time spent for transitions and supplies/materials retrieval.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Pace of instruction is rapid with teachers working towards engaging all students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. A combination of punishment and positive reinforcement are used at this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**X. Additional Instructional Time**

	Strongly Disagree	Disagree	Agree	Strongly Agree
59. Instructional time has been established and protected with uninterrupted blocks of time for curricular areas such as reading and math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. Extended-day programs with an academic focus are available for students below proficiency levels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61. Summer school programs with an academic focus are available for students below proficiency levels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62. Full-day, every day kindergarten is available to all students in your district.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63. A free preschool program is available for students in your district.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

64. What school-based practice(s) do you think have the MOST influence on student achievement?

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65. General Comment(s):

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If you would like to be entered in the drawing for (3) \$25.00 gift cards, please provide your name and address below:

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

## APPENDIX C. PANEL OF SIX EXPERTS

1. Lynn Goodwill, M.S., Elementary Principal, Prairie View Elementary
2. Connie Hovendick, Ed.D., Director, Lake Region Special Education
3. Donald Malchose, M.S., Statistical Consultant
4. Linda M. Paluck, M.S., Director of School Approval and Accreditation, Department of Public Instruction
5. Angela M. Wakefield, M.S., High School Counselor, Devils Lake High School
6. Lori Kalash, Ed. D., Associate Director of Community Services, North Dakota Center for Persons with Disabilities, Minot State University

## Faculty Advisor and Members of Doctoral Committee

7. Ronald Stammen, Ph.D., Professor, School of Education, North Dakota State University
8. Kara Wolfe, Ph.D., Assistant Professor, College of Human Development and Education, North Dakota State University
9. Stacy Duffield, Ph.D., Assistant Professor, School of Education, North Dakota State University
10. Justin Wageman, Ph.D., Associate Professor, School of Education, North Dakota State University



## APPENDIX D. PERMISSION FROM IRB

NDSU

NORTH DAKOTA STATE UNIVERSITY

Institutional Review Board

1000 College Ave. Box 5010-1000, Fargo, ND 58105-1000

NDSU IRB 1000

1735 N. 1st Ave. Box 1000

Fargo, ND 58105-1000

Phone: 701.785.8100

701.785.8100

Fax: 701.785.8000

Website: <http://www.ndsu.edu/irb>

Expires: April 24, 2011

Tuesday, May 11, 2010

Dr. Ronald Stammen  
School of Education  
FLC 216

**Re:** IRB Certification of Human Research Project

**"Increasing the Achievement of Economically Disadvantaged Student in High Poverty Schools"**

Protocol #HE10281

Co-investigator(s) and research team: **Debra Follman**

Study site(s): **varied** Funding: **n/a**

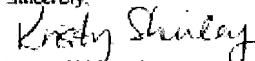
It has been determined that this human subjects research project qualifies for exempt status (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, *Protection of Human Subjects*). This determination is based on the protocol form received 4/29/2010 and consent/information sheet received 4/29/2010.

Please also note the following:

- This determination of exemption expires 3 years from this date. If you wish to continue the research after 5/10/2013, the IRB must re-certify the protocol prior to this date.
- The project must be conducted as described in the approved protocol. If you wish to make changes, pre-approval is to be obtained from the IRB, unless the changes are necessary to eliminate an apparent immediate hazard to subjects. A *Protocol Amendment Request Form* is available on the IRB website.
- Prompt, written notification must be made to the IRB of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- Any significant new findings that may affect the risks and benefits to participation will be reported in writing to the participants and the IRB.
- Research records may be subject to a random or directed audit at any time to verify compliance with IRB policies.

Thank you for complying with NDSU IRB procedures; best wishes for success with your project.

Sincerely,



Kristy Shirley, CIP  
Research Compliance Administrator

## APPENDIX E. CONSENT LETTER TO PRINCIPALS

**NDSU**

NORTH DAKOTA STATE UNIVERSITY

School of Education  
 NDSU Dept 2625  
 P.O. Box 6050  
 Fargo, ND 58108-6050

Administrative Offices  
 210 Family Life Center  
 701.231.7921  
 Fax 701.231.7616  
[www.ndsu.edu/ndsu/admin.htm](http://www.ndsu.edu/ndsu/admin.htm)

**NDSU RESEARCH STUDY****Increasing the Achievement of Economically Disadvantaged Students in High Poverty Schools**

Dear Elementary Principal:

My name is Debra Follman and I am an elementary principal in North Dakota. As part of my graduate work at North Dakota State University, I am conducting a research project to determine the school-based practices that help increase the achievement of students who live in poverty.

This contact to you is because your elementary school is currently identified by the North Dakota Department of Education as a school with 40% or more poverty. Your school also made Adequate Yearly Progress in the 2008-09 school year. I am asking for your approval in your school's participation in this study by placing these surveys, which are enclosed in envelopes, into the teacher's mailboxes. Because this is in May, it is critical that they receive the surveys very soon, so they will have time to fill them out and send them back to me.

Teachers will be informed that their participation is entirely voluntary and without penalty. The survey should take approximately 15 minutes or less to complete. When they have completed and submitted the survey, they will be invited to register for three \$25 drawings as a token of appreciation for participating in the study. Basic demographic information will be collected, but identities will not be revealed in the research results, and the responses will remain confidential. Only group comparisons will be made and reported in summary form.

If you have any questions about this project, please contact me via email ([Deb.Follman@sendit.nodak.edu](mailto:Deb.Follman@sendit.nodak.edu)) or phone (701) 662-7630, or contact my advisor, Dr. Ronald Stammen via email ([Ronald.Stammen@ndsu.edu](mailto:Ronald.Stammen@ndsu.edu)) or phone (701) 231-7210. If you have questions about the rights of human participants in research, or to report a problem, contact the NDSU IRB Office, (701) 231-8908, or [ndsu.irb@ndsu.edu](mailto:ndsu.irb@ndsu.edu).

Thank you for your participation in this research. If you wish to receive a copy of the results, please send an email request to Deb Follman at the address listed above.

Thank you,  
  
 Debra K. Follman, Doctoral Student  
 North Dakota State University

Elementary Principal, Sweetwater Elementary  
 Devils Lake, North Dakota

Counseling  
 SGC Suite C

Educational Leadership  
 210 Family Life Center

Teacher Education  
 ML Hall

Institutional Analysis  
 286 Family Life Center

Occupational Adult Education  
 216 Family Life Center

NDSU is an equal opportunity institution

## APPENDIX F. CONSENT LETTER TO TEACHERS

**NDSU****NORTH DAKOTA STATE UNIVERSITY**

School of Education  
 NDSU Dept 2625  
 P.O. Box 6050  
 Fargo, ND 58108-6050

Administrative Offices  
 210 Family Life Center  
 701.231.7922  
 Fax 701 231 7416  
[www.ndsu.edu/ndsu/education](http://www.ndsu.edu/ndsu/education)

**NDSU RESEARCH STUDY****Increasing the Achievement of Economically Disadvantaged Students in High Poverty Schools**

Dear Elementary Teacher:


My name is Debra Follman and I am an elementary principal in North Dakota. As part of my graduate work at North Dakota State University, I am conducting a research project to determine the school-based practices that help increase the achievement of students who live in poverty.

You are invited to participate in this research study because the elementary school in which you teach is currently identified by the North Dakota Department of Education as a school with 40% or more poverty. Your school also made Adequate Yearly Progress in the 2008-09 school year. Participation is entirely voluntary and you may decline from participation without penalty. Your principal will not be informed of your participation status.

The survey should take approximately 15 minutes or less to complete. When you have completed it, please use the addressed-stamped envelope to return it. As a token of appreciation, you will be invited to register for three \$25 drawings for participating in the study. Basic demographic information will be collected, but your identity will not be revealed in the research results, and the responses will remain confidential. Only group comparisons will be made and reported in summary form. By submitting the survey, you are agreeing to be a part of this study.

If you have any questions about this project, please contact me via email ([Deb.Follman@sendit.nodak.edu](mailto:Deb.Follman@sendit.nodak.edu)) or phone (701) 662-7630, or contact my advisor, Dr. Ronald Stammen via email ([Ronald.Stammen@ndsu.edu](mailto:Ronald.Stammen@ndsu.edu)) or phone (701) 231-7210. If you have questions about the rights of human participants in research, or to report a problem, contact the NDSU IRB Office, (701) 231 8908, or [ndsu.irb@ndsu.edu](mailto:ndsu.irb@ndsu.edu).

Thank you for your participation in this research. If you wish to receive a copy of the results, please send an email request to Deb Follman at the address listed above.

Thank you,  
  
 Debra K. Follman, Doctoral Student  
 North Dakota State University

Elementary Principal, Sweetwater Elementary  
 Devils Lake, North Dakota

Cooperating  
 SCCC Suite

Educational Leadership  
 210 Family Life Center

Teacher Education  
 155 EML Hall

Institutional Analysis  
 216 Family Life Center

Occupational Adult Education  
 216 Family Life Center

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## APPENDIX G. BEST PRACTICES DATA BY DEMOGRAPHICS

	Demographic Characteristic			p-value
	Mean (SD)			
22. High Expectations	3.45 (0.54)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.46 (0.55)		3.43 (0.53)	0.74
	Years of Experience			
	<u>New</u> <u>0-5 Years</u>	<u>Experienced</u> <u>6-10 Years</u>	<u>Veteran</u> <u>11 or more</u>	
	*3.55 (0.50)	*3.28 (0.55)	3.46 (0.54)	0.05*
23. Develop positive personal relationships	3.32 (0.54)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.28 (0.50)		3.35 (0.64)	0.45
	Years of Experience			
	<u>New</u> <u>0-5 Years</u>	<u>Experienced</u> <u>6-10 Years</u>	<u>Veteran</u> <u>11 or more</u>	
	3.44 (0.63)	3.15 (0.49)	3.31 (0.62)	0.09
24. Students aware of expectations	3.45 (.61)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.49 (0.57)		3.41 (0.57)	0.35
	Years of Experience			
	<u>New</u> <u>0-5 Years</u>	<u>Experienced</u> <u>6-10 Years</u>	<u>Veteran</u> <u>11 or more</u>	
	3.52 (0.60)	3.42 (0.54)	3.40 (0.56)	0.47

Table 5. High Expectations for Learners

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 6. Leadership

	Demographic Characteristic		p-value
	Mean (SD)		
25. Principal knowledgeable about standards and curriculum	3.47 (0.57)		
	School District Size		
	<u>Rural</u>	<u>Urban</u>	
	3.35 (0.56)	3.56 (0.56)	0.02*
	Years of Experience		
	New	Experienced	Veteran
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>
	3.54 (0.57)	3.37 (0.54)	3.47(0.57)
			0.34
26. Principal sets high expectations for learning	3.37 (0.62)		
	School District Size		
	<u>Rural</u>	<u>Urban</u>	
	3.38 (0.57)	3.35 (0.67)	0.74
	Years of Experience		
	New	Experienced	Veteran
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>
	3.49 (0.61)	3.21 (0.58)	3.36 (0.64)
			0.13
27. Principal monitors effectiveness	3.23 (0.71)		
	School District Size		
	<u>Rural</u>	<u>Urban</u>	
	3.25 (0.60)	3.21 (0.78)	0.76
	Years of Experience		
	New	Experienced	Veteran
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>
	3.38 (0.70)	2.97 (0.64)	3.26 (0.72)
			0.24
28. Principal works to create sense of community	3.19 (0.77)		
	School District Size		
	<u>Rural</u>	<u>Urban</u>	
	3.10 (0.75)	3.26 (0.79)	0.21
	Years of Experience		
	New	Experienced	Veteran
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>
	3.25 (0.74)	2.97 (0.78)	3.25 (0.78)
			0.14

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 6. Leadership (continued)

	Demographic Characteristic			p-value
	Mean (SD)			
29. Principal encourages parent involvement	3.21 (0.70)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.17 (0.62)		3.24 (0.76)	0.56
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.35 (0.63)	3.0 (0.75)	3.22(0.71)	0.06

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 7. Assessment

	Demographic Characteristic Mean (SD)			p-value
30. School-wide commitment to assessment	3.46 (0.65)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.45 (0.62)		3.46 (0.68)	0.98
	Years of Experience			
	<u>New 0-5 Years</u>	<u>Experienced 6-10 Years</u>	<u>Veteran 11 or more</u>	
	3.58 (0.57)	3.38 (0.67)	3.41 (0.69)	0.27
31. Variety of assessment strategies	3.51 (0.61)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.54 (0.58)		3.49 (0.63)	0.59
	Years of Experience			
	<u>New 0-5 Years</u>	<u>Experienced 6-10 Years</u>	<u>Veteran 11 or more</u>	
	3.57 (0.64)	3.50 (0.64)	3.48 (0.57)	0.73
32. Data is collected to guide instruction	3.28 (0.71)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.27 (0.68)		3.28 (0.72)	0.87
	Years of Experience			
	<u>New 0-5 Years</u>	<u>Experienced 6-10 Years</u>	<u>Veteran 11 or more</u>	
	3.40 (0.76)	3.15 (0.74)	3.26 (0.65)	0.02
33. Systematic analysis of student data	3.27 (0.72)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.24 (0.73)		3.29 (0.72)	0.66
	Years of Experience			
	<u>New 0-5 Years</u>	<u>Experienced 6-10 Years</u>	<u>Veteran 11 or more</u>	
	3.29 (0.80)	3.08 (0.73)	3.35 (0.66)	0.14

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 7. Assessment (continued)

	Demographic Characteristic			p-value
	Mean (SD)			
34. On-going monitoring of student learning	3.39 (0.68)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.36 (0.61)		3.41 (0.66)	0.64
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.51 (0.67)	3.30 (0.72)	3.36 (0.66)	0.28

\*p < .05, \*\*p < .01, \*\*\*p < .001



Table 8. Effective Teachers

	Demographic Characteristic			p-value
	Mean (SD)			
35. School-wide commitment to assessment	3.50 (0.56)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.42 (0.50)	3.60 (0.60)		0.11
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.45 (0.61)	3.48 (0.55)	3.53 (0.53)	0.66
36. Staff members establish caring relationships	3.32 (0.66)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.20 (0.66)	3.42 (0.65)		0.02*
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.35 (0.67)	3.23 (0.74)	3.35 (0.62)	0.61
37. Teachers effectively teach most difficult students	2.97 (0.65)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	2.92 (0.61)	3.01 (0.68)		0.37
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.00 (0.71)	2.83 (0.55)	3.03 (0.66)	0.26
38. Teachers believe instruction determines students' success	3.14 (0.58)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.08 (0.56)	3.18 (0.59)		0.25
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.04 (0.68)	3.05 (0.40)	3.24 (0.58)	0.10

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 9. Guaranteed and Viable Curriculum

	Demographic Characteristic Mean (SD)			p-value
39. Written curriculum is linked to state standards	3.33 (0.64)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.32 (0.60)	3.34 (0.68)	0.81	
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.25 (0.65)	3.26 (0.55)	3.42 (0.67)	0.24
40. Curriculum is articulated vertically and horizontally	3.10 (0.66)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.12 (0.70)	3.06 (0.63)	0.72	
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.19 (0.66)	3.10 (0.60)	3.04 (0.70)	0.44
41. Teachers are clear about what students should know	3.17 (0.67)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.17 (0.69)	3.18 (0.66)	0.97	
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.19 (0.74)	3.13 (0.65)	3.19 (0.64)	0.86
42. Checkpoints are developed to assure learning is occurring	2.96 (0.74)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.03 (0.79)	2.91 (0.71)	0.34	
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.00 (0.76)	2.85 (0.62)	3.00 (0.80)	0.54

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 10. Collaborative School Environment

	Demographic Characteristic Mean (SD)			p-value
43. Professional learning communities established	2.85 (0.75)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	2.91 (0.69)	2.80 (0.79)		0.36
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	2.92 (0.70)	2.64 (0.81)	2.90 (0.73)	0.14
44. Staff work collaboratively to analyze and act upon data	2.99 (0.72)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.03 (0.74)	2.98 (0.70)		0.67
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.00 (0.77)	2.82 (0.72)	3.09 (0.67)	0.16
45. Support mechanisms are in place to facilitate successful collaboration	2.84 (0.72)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	2.86 (0.67)	2.82 (0.68)		0.77
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	2.89 (0.75)	2.64 (0.71)	2.90 (0.71)	0.15
46. Staff members feel responsible to help each other do their best	2.96 (0.76)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	2.87 (0.77)	3.03 (0.75)		0.17
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	2.83 (0.78)	**2.77 (0.81)	**3.14 (0.68)	0.014**

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 11. Professional Development

	Demographic Characteristic Mean (SD)			p-value
47. Professional development is linked to teaching and achievement	3.08 (0.60)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.27 (0.62)	2.94 (0.55)		t = 0.0002***
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	3.09 (0.62)	2.93 (0.57)	3.16 (0.60)	F = 0.13
48. Staff are engaged in rigorous studies of what they teach	2.68 (0.68)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	2.77 (0.71)	2.62 (0.67)		t = 0.17
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	*3.09 (0.62)	*2.48 (0.55)	2.69 (0.72)	F = 0.04*
49. Professional development reflects research-based instruction	3.08 (0.61)			
	School District Size			
	<u>Rural</u>	<u>Urban</u>		
	3.23 (0.58)	2.96 (0.60)		t = 0.002**
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	**3.20 (0.56) <sup>a</sup>	**2.83 (0.64) <sup>ab</sup>	**3.12 (0.59) <sup>b</sup>	F = 0.007**

\*p < .05, \*\*p < .01, \*\*\*p < .001

Note: Numbers in the same row followed by the same superscript are significantly different from one another at the level indicated by the \*

Table 12. Parent Involvement

	Demographic Characteristic Mean (SD)			p-value
50. Teachers reach out to parents to engage them in student learning	3.05 (0.54)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.05 (0.51)		3.04 (0.57)	t = 0.89
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.06 (0.53)	2.88 (0.56)	3.12 (0.55)	F = 0.06
51. Teachers understand cultural backgrounds, values, and attitudes	2.99 (0.72)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	2.99 (0.53)		2.97 (0.52)	t = 0.83
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.00 (0.58)	*2.80 (0.46)	*3.05 (0.49)	F = 0.04*
52. School collaborates with social services	3.15 (0.55)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.03 (0.51)		3.25 (0.56)	t = 0.006**
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.17 (0.64)	3.08 (0.35)	3.18 (0.57)	F = 0.58
53. Teachers keep parents informed of classroom activities	3.04 (0.67)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	2.96 (0.67)		3.10 (0.66)	t = 0.17
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.04 (0.75)	2.87 (0.57)	3.12 (0.64)	F = 0.15

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 12 Parent Involvement (continued)

	Demographic Characteristic			p-value
	Mean (SD)			
54. Opportunities for parents to learn are provided	2.74 (0.68)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	2.61 (0.73)		2.84 (0.62)	t = 0.02*
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	2.80 (0.79)	2.65 (0.62)	2.74 (0.62)	F = 0.58

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 13. Classroom Management

	Demographic Characteristic			p-value
	Mean (SD)			
55. Classroom rules have been developed and posted	3.25 (0.66)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.18 (0.65)		3.29 (0.68)	t = 0.31
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.38 (0.63)	3.10 (0.59)	3.23 (0.71)	F = 0.13
56. Routines have been established to minimize transition time	3.34 (0.56)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.37 (0.61)		3.29 (0.54)	t = 0.34
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	*3.51 (0.58)	*3.15 (0.58)	3.28 (0.53)	F = 0.01*
57. Pace of instruction is rapid with engagement of all students	3.12 (0.65)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.21 (0.66)		3.05 (0.64)	t = 0.11
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.28 (0.66)	3.05 (0.64)	3.05 (0.65)	F = 0.10
58. A combination of punishment and positive reinforcement is used	3.27 (0.60)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.30 (0.59)		3.23 (0.62)	t = 0.47
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	3.41 (0.63)	3.28 (0.60)	3.16 (0.58)	F = 0.06

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 14. Additional Instruction Time

	Demographic Characteristic			p-value
	Mean (SD)			
59. Instructional time is protected with uninterrupted blocks of time	3.13 (0.74)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.13 (0.78)		3.13 (0.72)	t = 0.99
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	**3.42 (0.69) <sup>abc</sup>	**2.95 (0.76) <sup>b</sup>	**3.04 (0.73) <sup>ac</sup>	F = 0.003**
60. Extended-day programs are available	3.10 (0.88)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.00 (0.97)		3.19 (0.80)	t = 0.15
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	3.22 (0.95)	2.85 (0.87)	3.16 (0.80)	F = 0.09
61. Summer school programs are available	3.28 (0.75)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.06 (0.88)		3.44 (0.59)	t = 0.0008***
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	***3.61 (0.60) <sup>ab</sup>	***3.18 (0.78) <sup>a</sup>	***3.11 (0.77) <sup>b</sup>	F = 0.0003***
62. Full-day, every day kindergarten is available	3.66 (0.49)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	3.65 (0.51)		3.67 (0.47)	t = 0.86
	Years of Experience			
	New <u>0-5 Years</u>	Experienced <u>6-10 Years</u>	Veteran <u>11 or more</u>	
	*3.80 (0.41)	*3.51 (0.56)	3.64 (0.48)	F = 0.02*

\*p < .05, \*\*p < .01, \*\*\*p < .001



Table 14. Additional Instruction Time (continued)

	Demographic Characteristic			p-value
	Mean (SD)			
63. A free preschool program is available	2.85 (0.96)			
	School District Size			
	<u>Rural</u>		<u>Urban</u>	
	2.72 (1.00)		2.94 (0.92)	t = 0.14
	Years of Experience			
	New	Experienced	Veteran	
	<u>0-5 Years</u>	<u>6-10 Years</u>	<u>11 or more</u>	
	2.79 (1.04)	**2.45 (0.88)	**3.07 (0.88)	F = 0.003**

\*p < .05, \*\*p < .01, \*\*\*p < .001

Note: Numbers in the same row followed by the same superscript are significantly different from one another at the level indicated by the \*