Effective Teaching in High Poverty Schools

by

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Abstract

My experiences as a teacher in a high-poverty elementary school led me to believe that the most critical ingredient in the academic success of at-risk students is effective teaching. When teaching standards that are mandated by the state cannot be changed, the techniques educators adopt in teaching must be innovative. The purpose of this study is to examine what effective educators of children from poverty do on a daily basis with the children they teach. This study examines three educators, teaching grades three, four, and five, during their math lessons over a three-day period. I interviewed each educator to understand their views on working with children from poverty and their teaching techniques. Furthermore, each educator was given a follow-up interview to clarify her previous interview and classroom observations. During the classroom observations of math lessons I looked for the following areas of effective teaching: differentiation of instruction, student engagement, questioning techniques, positive teacher-student relationships, and evidence that students were participating in a community of learners. As I reflect on my time as a teacher, I am convinced that I have been an effective educator of at risk children because; I have come to understand and realize that effective teachers have a variety of techniques in which they draw upon. I have taught fourth and fifth grades for seven years. The schools in which I have taught, poverty has been an integral part of the lives of many of my students. My experiences as a teacher in a high-poverty elementary school led me to believe that the most critical ingredient in the academic success of at-risk students is effective teaching.

Acknowledgments

"Education is the most powerful weapon which you can use to change the world."
Nelson Mandela

Many times I am asked, "Why do you teach those children?" I believe that the essence of an effective teacher is having compassion and love for those who need it most. I first want to acknowledge the children who I am honored to teach each and every day. They make me realize that there is hope and beauty in the world, even though at times things get crazy! I love each and every one of them. I also want to thank the wonderful colleagues with whom I work each day who have opened their classrooms to me and given me their insights. I want to express my love and thankfulness to my true friends; those of you who have supported me in this process and in my life. I don't use the word "friendship" lightly: you know who you are and I thank you for loving me.

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life with me. Today, this is your accomplishment, as well as mine. You have given so much and sacrificed for everyone. I love you more than words can express. It saddens me that you cannot physically be here with me as I complete my degree. I am confident that you are happy in heaven, smiling down on me. I will carry you forever in my heart. I hope to always make you proud of me.

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Chapter 1: Introduction

Today few would argue that the work that effective educators do in the classroom is at the core of successful schools serving students from low-income families (Jacob & Ludwig, 2009). Educators who have the expertise and experience of working with at-risk children of poverty must be studied to learn what it is they do that enables children from poverty to be successful. In this study, effective educators will share their successes, lessons, differentiation techniques, strategies for building relationships with students, and personal reflections of what makes them exceptional. However, there is a tendency to place new and inexperienced educators in schools in which the majority of the students are from low-income families (Boyd, Lankford, Loeb & Wycoff, 2008). These educators are frequently inadequately prepared to teach children of poverty. Experienced educators must help novice educators develop the tools to be successful. It is vital that educators share with those who do not know the challenges that children from poverty face.

As a teacher in an elementary school that serves a low-income population in the southeastern part of the United States, I work with children who spend every day facing the burdens of poverty. My fellow educators and I often discuss the students we teach and ask ourselves how we can best support our students. What strategies can we put in place so that they can construct meaning with the academic content to make connections for better understanding? What are our personal beliefs and qualities that set us apart to be successful educators of children of poverty? How do we build effective relationships with these children and help them see the

value of a quality education? What management styles do we employ to help them be their best without destroying their individuality? We are, however, sometimes limited by our own middle and upper class backgrounds and perceptions, which we must leave at the door in order to do what is best for our students.

As educators, we must find ways to increase the academic achievement of children from poverty. Effective educator quality for children in poverty is a necessary component for students who come to school from backgrounds characterized by limited financial means.

Research indicates that effective teaching is the most important school

factor in a child's education. But, high-poverty schools are often challenging places to

teach, they suffer disproportionately from small applicant pools and high teacher

turnover—and, as a result, their teaching force often includes a disproportionate number

of new and less-experienced teachers (Intensive Assistance, n.d.).

Educators must understand what children of poverty face and what qualities are needed for them to be successful in and out of school. Educators must hold children from impoverished backgrounds to the same high expectations as others. Through discussions, sharing of ideas, and implementation of innovative practices with effective educators we can find solutions to help these children, so that they will have access to the American dream.

Statement of the Problem

Exactly what do effective educators of children from poverty do on a daily basis to make a difference in the lives of the children they teach? What characteristics do they possess that set them apart and cause them to make an indelible mark on a young person's life? Is it the connections that they make on a personal level? Is it the techniques and strategies that are implemented in the classroom to deliver the curriculum? Whatever it is, effective teachers of

children from poverty are making tremendous accomplishments on a daily basis. Whether it is the instructional strategies, teaching techniques, personal characteristics of the teacher, or the connections that they make with their students, many educators of children from poverty are achieving results in spite of tremendous obstacles (Reeves, 2003).

One of many strategies utilized by effective educators that has shown great results is "teaching for meaning". This strategy refers to alternatives to conventional practice in teaching children in high poverty classrooms (Knapp, Shields, & Turnbull, 1995). In order to teach children from poverty, three components must be utilized. The first of these is instruction that helps students to understand the relationship of parts to wholes, which is the application of skills to communicate, comprehend, or reason. Second is instruction that provides students with the tools to construct meaning in their encounters with academic tasks and in the world in which they live. The third and final component is instruction that makes explicit connections between one subject area and the next and between what is learned in school and children's home lives (Knapp, Shields, & Turnbull, 1995). In various ways, teaching for meaning derives from the broader concept of "teaching for understanding," which has its roots in cognitive research and constructivist assumptions about teaching and learning (Knapp, Shield, & Turnbull, 1995).

Educators of children of poverty can try to make up for the probable lack of resources in the home by providing an abundance of educational materials in the classroom, thereby creating enriching school environments (Parsley & Corcoran, 2003). Improving teaching methods mainly involves making what is being learned relevant to students' lives. Schools must stop using ineffective teaching strategies with children of poverty. Too many educators use power and control rather than democratic principles in managing their classrooms (Parsley & Corcoran, 2003). The failure to develop an internal locus of control is one major roadblock to the success

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of children of poverty. When students believe that their success or failure is determined by factors outside of themselves, educators must help them change their thinking and take responsibility for their learning (Parsley & Corcoran, 2003).

A major theme in Howard's (2001) work on effective educators of children in poverty is holistic instructional strategies. Educators in his study believed that their responsibilities as educators extended beyond academic material and included building both moral and social competencies in students. Educators instructed their students on social etiquette and encouraged their students not to reinforce negative stereotypes. These educators believed that values such as perseverance, responsibility, and respect for authority needed to be explicitly taught (Howard, 2001). Similarly, they spent considerable time talking to students about the importance of taking responsibility for their own education. In Howard's (2002) study on students' descriptions of effective educators, participants discussed the importance of a teacher getting to know his/her students outside the classroom and showing curiosity about students' interests. In other studies (Ladson-Billings, 1994; Ware, 2006), educators have discussed how they used personal connections with students as a way to motivate them to meet educators' high expectations (Howard, 2002).

Although the term "effective teacher" is vague, research has revealed that there are common characteristics that educators who have been classified as "effective" often hold. Stronge and Hindman (2003) have classified the research regarding teacher effectiveness into six areas. The first area involves at the prerequisites of effective educators. Stronge and Hindman note that effective educators tend to have specific qualities such as strong speaking abilities, prior teaching experience, and a deep understanding of the content that they are required to teach. Stronge and Hindman's second domain looks at the teacher as a person. They note that

effective educators "exhibit caring and fairness, have a positive attitude about life and teaching, are reflective thinkers, and have high expectations for themselves and their students" (Stronge and Hindman, 2003, p.51).

The third area involves at the classroom management and organizational abilities of educators. Stronge and Hindman (2003) conclude that an effective teacher has mastered strategies for maintaining a safe, orderly, positive, and productive learning environment. The fourth area looks at how educators organize their instructional day. The researchers conclude that effective educators set high goals for their students, plan effective instruction, and provide a classroom atmosphere where children are required to be successful. The fifth area defines teacher effectiveness by the way a teacher implements instruction. According to Stronge and Hindman, an effective teacher "fosters higher student learning gains by providing instruction that meets individual needs through the use of such strategies as hands-on learning, problem solving, questioning, guided practice, and feedback" (p. 51). The sixth area relates to how a teacher assesses students' progress and potential. Stronge and Hindman conclude that effective educators frequently monitor how students are performing and alter the instructional strategies used to address the learning needs of their students. The goal of an effective teacher, according to Stronge and Hindman, is to "adjust instruction so that all students in the classroom achieve, regardless of the range of student abilities" (p. 51).

Research offers many examples of what an effective teacher encompasses. Clark (1993, wrote that, "Obviously, the definition involves someone who can increase student knowledge, but it goes beyond this in defining an effective teacher" (p.10). Vogt (1984) correlated effective teaching to the ability to provide instruction to diverse students of different abilities while integrating instructional objectives and assessing the learning of students. Collins (1990), while

working with the Teacher Assessment Project established five criteria for an effective teacher: (a) is committed to students and learning, (b) knows the subject matter, (c) is responsible for managing students, (d) can think systematically about their own practice, and (e) is a member of the learning community (Clark, 1993, p. 11). For researchers Swank, Taylor, Brady, and Frieberg (1989) effective teaching means increasing academic questions and decreasing lecture and ineffective practices, such as negative feedback and low-level questions. Million (1987) based effectiveness on the lesson design and method of delivery. Papanastasiou (1999) stated "that no single teacher attribute or characteristic is adequate to define an effective teacher" (p. 6).

Setting high standards is another promising step in educating children of poverty. If high standards are not part of their home lives, then schools must put in place criteria that will enable them to be successful. Secondly, challenging standards must be presented to children of poverty. The requirements and what is being taught must not be modified or changed. They will face the same world as their peers; therefore, they must be prepared to meet the challenges of the future. Equity and distribution of school resources is a key ingredient in school improvement for children of poverty. Finally, educators who have expertise in certain fields must be placed in schools that need them most. Accountability must be high for these educators due to the responsibility that has been placed upon them. These educators must be given the resources to be successful as well as support from administrators.

Significance of the Problem

According to research conducted by Murnane and Steele (2007), the United States must equip its young people with the skills essential in the new economy by hiring high-quality educators and placing them in areas they are needed most more important than ever. In recent years, the demand for effective educators has increased as enrollments have risen, class sizes

have grown, and a large share of the educator workforce has begun to retire. Women and minorities have more career options than ever before, making it increasingly difficult to attract and retain the many effective educators who are needed. Moreover, schools are limited in their ability to identify and reward the most effective educators. Perhaps the most urgent problem facing American education is the unequal distribution of high-quality educators: poor children and children of color are disproportionately assigned to educators with the least preparation and the weakest academic backgrounds. Teacher turnover is high in schools that serve large shares of poor or nonwhite students because the work is difficult, and the educators who undertake it are often the least equipped to succeed (Murnane & Steele, 2007).

One way to improve American education relates to learning opportunities and results for students of poverty. The educational challenge facing the United States is not that its schools are not as good as they once were; it is that schools must help the vast majority of young people reach levels of skill and competence that were once thought to be within the reach of only a few (Darling-Hammond, 1996). In order to help children of poverty meet and exceed the same standards and curriculum requirements as their wealthier peers, it is necessary to give each of these children the same or better quality educators than we would want middle and upper class children to have, to put in place strategies and techniques that assist children of poverty in becoming successful in learning a challenging curriculum, and to embrace innovative teaching and learning techniques for students of poverty. Educators must present instruction that is considered outside the box in traditional classrooms. As with all students, effective educators of poor children must also know the content that they teach and be highly qualified to deliver instruction. No longer can we have educators who are not qualified to teach children of poverty.

These children are the ones who need additional academic support and the educational system must provide what they need.

Effective educators realize that they cannot create change alone, nor will alternatives to solving problems come from bureaucrats (Wagner, 2001). Change will only come through basic common sense principles of treating children of poverty with respect and teaching these children how to interact with the world at the highest levels. Effective educators must challenge the paradigms of all those who interact with children of poverty on a daily basis. Every child, whether they are from privilege or not, deserves an effective and competent educator, someone who wants the best from them and challenges them to give their best each day. With the increased pressure on educators and the educational system to advance, improvements must be achieved immediately. One way to do this is to change how educators and students relate to each other. It is impossible to teach children anything of significance that they will treasure or remember unless we build some type of relationship with them, and this is especially the case with those who are from poverty (Thompson, 1998). Effective educators of children of poverty must possess qualities that set them apart from others and inspire the students they serve to greatness in order for them to overcome their current circumstances.

Children from lower socioeconomic backgrounds, on average, perform significantly less well than middle and upper class children on numerous indicators of academic achievement, including test scores, grade retentions, course failures, placement in special education, high school graduation, dropout rates, and completed years of schooling (White, 1982). Studies using a test of mathematical knowledge for teaching developed by Hill and Ball have found that teachers' performance of such items is related to their students' gains in mathematics (Hill, Rowan, & Ball, 2005). Analyses suggest that among traditional indicators of socioeconomic

level, family income is the highest single correlate of academic achievement, followed by parental occupation and parental education. Socioeconomic measures that combine income and occupation, education and occupation, or all three components are only slightly more highly correlated with academic achievement than is income alone (White, 1982).

Poor children face many more problems in childhood than their peers. In many instances they are inadequately clothed, fed, and do not receive the necessary required medical attention (Lewit, 1993). They also have high rates of exposure to violence, chronic illnesses, and family problems, which include substance abuse and mental illness. These problems carry over to schools and at times prevent students from performing at required levels. Children are also continuously caught in cycles that cause poverty, such as teenage pregnancy, school failure, and substance abuse (Lewit, 1993).

Recent research has reported that persistent poverty has more detrimental effects on IQ, school achievement, and socio-emotional functioning than transitory poverty, with children who experience either of these types of poverty generally doing less well than never-poor children (McLoyd, 1998). Higher rates of perinatal complications, reduced access to resources that buffer the negative effects of perinatal complications, increased exposure to harmful chemicals, and less home-based cognitive stimulation partly account for diminished cognitive functioning in poor children. These factors contribute to poorer academic-readiness skills, and also appear to contribute to lower levels of school achievement among poor children (McLoyd, 1998). So how do schools and educators combat the issues of children of poverty? In this research, I present ideas and strategies of what effective educators do each day to make a difference to the education of such students, with specific focus on the teachers' personal characteristics.

Effective educators are those who are outstandingly successful in terms of student achievement, building parental relationships, and working with administrator attitudes (Haberman, 1995). Effective educators are above all else decent people. They tend to be nonjudgmental and not moralistic. Effective educators listen and actually hear the things their students, students' parents, and the community have to say (Haberman, 1995). They recognize the impact of their own feelings, and they try to overcome them. They do not see themselves as saviors of the schools, and they do not really expect schools to change very much, but see themselves as agents of change for academic achievement. They see themselves as winning in their interactions with children, and they enjoy these interactions so much that they are willing to put up with the irrational demands of the school system (Haberman, 1995). Effective teachers derive all types of satisfaction and meet all kinds of internal needs by teaching children and youth in poverty, except of the need for power. The importance of positive teacher-student relationships applies to all grade levels. Through respect, courtesy, shared responsibility, and a sense of community, educators convince students that they are working together and that everyone is wanted and needed in the classroom (Haberman 1995).

The research presents a diverse array of strategies that educators can put in place to help children of poverty. Ladson-Billings (1997) encourages educators to use a student's culture in order to ameliorate and transcend the negative effects of the dominant culture. The aim in doing so is to assist in the development of a culturally relevant "personality" that allows black students to choose academic excellence yet still identify with black culture (Ladson-Billings, 1997). It is a pedagogy that empowers students by using cultural referents to impart knowledge, and which moves between two cultures but recognizes each as legitimate (pp. 17-18). It is the antithesis of assimilation; it aims at a level of excellence and emphasizes sharing responsibility. A successful

culturally relevant teacher is viewed as a "coach" to the children she serves (Ladson-Billings, 2005).

In her seminal work on successful educators of African American children, Ladson-Billings (1994) described teaching practices that she suggested be made available to all children. Using a qualitative ethnographic methodology, Ladson-Billings interviewed, observed, and held focus groups with eight educators who were deemed "successful" by parents, principals, and colleagues. Ladson-Billings defined culturally relevant pedagogy as teaching that uses student culture and background in order to ameliorate and surpass the negative effects of the mainstream world in which students live. She further explained, "Culturally relevant teaching is about questioning (and preparing students to question) structural inequality, racism, and the injustices that exist in society" (p. 128). Although Ladson-Billings (1995) claimed that culturally relevant practices are examples of good teaching, she argued that it is much more than "just good teaching" (p. 159). One of the most common elements of culturally relevant teaching found in the literature is the importance of establishing connections in the classroom. In a culturally relevant classroom, the teacher-student relationship is "fluid and humanely equitable" (Ladson-Billings, 1994, p. 61).

Purpose of the Study

The purpose of this research is to identify characteristics of highly effective educators of children of poverty. How are successful relationships built and maintained by these educators? What do these educators do each day in their classrooms to establish meaning and teach a rich and in-depth curriculum that is often challenging? It is especially important to identify the success stories of educators and students in demanding classrooms. This research will provide valuable information for educators as they strive to close the achievement gap and encourage the

development of academic skills for children from poverty. It is also important for educators to understand how to develop those invaluable moments between students and themselves in which the foundation of learning can begin to grow.

As I reflected on how to approach this project, I began with my own school. Working at a Title I school with a poverty rate of 100% has its challenges. I often wondered how we manage to make AYP (Adequate Yearly Progress) each year, given the obstacles we are faced with, such as students who come to school with academic deficiencies, emotional problems, and health issues. With the pressure that schools and districts are under to make AYP, the educational system must find ways to tap into its most valued resources. Educators implement innovative curricula, establish relationships, and handle difficult situations in diverse ways. The fact that these educators perform their duties with grace and success when working with children of poverty is a testament to their commitment to teaching. They refuse to accept the common assumption that children of poverty are incapable of achieving at high levels. Analyzing what these educators do and how they do it successfully is the focus of this research. Observing these educators in their classrooms and interviewing them in order to gain their unique perspective will assist in understanding the keys to their achievements in working with children from poverty.

As I began my study, I identified three educators who are deemed highly effective according to several criteria. These educators consistently have test scores which average in the exceed category (850 or above) on the Georgia Criterion Referenced Competency Test. They build long-lasting relationships with their students and families. All of these teachers have taught multiple siblings in the same families as well as taught the same child more than one year. Finally, they use strategies to teach their students that are traditional, but are delivered with innovative techniques (Stronge, 2007). These teachers' techniques and strategies have been

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identified by the administration as being exemplary and they have been designated as model

classroom teachers. These educators have unique stories on how they came to the field of

education, and their backgrounds and belief systems drive their teaching practices. They are not

afraid to challenge the system in order to do what is deemed best for the children they serve.

These educators are risk takers and believe that if strategies are educationally sound, they will try

to implement whatever works to help their children be academically and socially successful.

While planning for this study, I realized that there were many research questions to be

answered and a number of different components on which I could focus. As an educator and

researcher, I deemed it most important to actually examine what other effective educators are

doing in their classrooms with children of poverty. The goal of this research is to influence new

and experienced educators to reflect on current practices and perhaps make adjustments to their

existing techniques. With massive amounts of data and many questions that could possibly

emerge, the focus of the research questions are on the characteristics of effective educators of

children of poverty and the strategies and practices that they utilize on a daily basis that allows

their students to be successful despite what is expected of them from society. The practices and

characteristics of educators were examined and how they impacted the students that they served.

This research was based on what teachers do that affect student outcomes. Observations,

interviews, and artifacts from the students were used as sources for data.

Research Questions

This study was conducted to examine the characteristics and strategies of effective

educators who work with children of poverty. The use of grounded theory, a qualitative

approach, enhanced the study's potential to discover the experiences of effective educators and

the daily practices of their classrooms. Three effective educators, all of whom worked at the

same research site, were chosen to participate in this study. These educators taught different grade levels, had diverse educational backgrounds, and characteristics, but all have a unique commitment to educating children from poverty. The goal in working with these educators was to observe and interview them in their educational setting and seek answers to the following questions.

1. What characteristics do effective educators who teach children from poverty possess?

2. What strategies do effective educators implement that affect the learning of children from poverty?

The outline of the remaining chapters are as follows: Chapter 2 will provide a review of literature that details effective teaching strategies, resiliency, and characteristics of effective educators and schools that are successful in working with children from poverty. Chapter 3 will discuss the methodology used for this study. Chapter 4 describes the findings from this study and Chapter 5 provides conclusions, implications, and suggestions for further research.

Chapter 2: Literature Review

The central focus of this research is to not only identify characteristics of high poverty schools, but what strategies do these schools utilize to be successful in the face of overwhelming obstacles. Focusing on educators, who work with high poverty students, who have proven to be successful by their standardized test scores, establishment of relationships, and diverse teaching strategies, will be explored. The literature review will examine effective math instruction for high poverty schools. Finally, the resiliency characteristics of the children who attend these schools and how their unique culture should be utilized to enable them to be successful will be examined.

Poverty Schools

The schools classified as "90/90/90" have the following characteristics: more than 90% of the students are eligible for free or reduced lunch, a commonly used standard for low-income families; more than 90% of the students are from ethnic minorities; and more than 90% of the students achieve at high academic rates (Reeves, 2003). A focus on academic achievement data regarding the continuous improvement students have made is a key to success at 90/90/90 schools. Spending more time on the core subjects of reading, writing, and mathematics and less time on other subjects emphasizes the core skills in order to improve student opportunities for success in a wide variety of other academic endeavors later. These schools consistently find ways to provide additional instructional time for their students or "time on task" especially in reading and mathematics (Barth, 1999, Carter 2000, Cawelti 2000, Feldman 2003, Kannapel &

Clements 2005, & McGee, 2004). It is interesting to note parenthetically that, despite their

disproportionate emphasis on reading and mathematics, these schools also significantly out-

performed their peer schools on science tests as well. This makes an important point that eludes

those who remain committed to a coverage model: tests of science, social studies, study skills,

and virtually every other subject area are, in fact, tests of reading and writing (Reeves, 2003).

There is frequent assessment of student progress and multiple opportunities for improvement;

specifically included are students whose skills were significantly below grade level in academic

achievement as they entered the school (Barth, 1999). The consistent message of 90/90/90

schools is that the penalty for poor performance is not a low grade, followed by a forced march

to the next unit; rather, student performance that is less than proficient is followed by multiple

opportunities to improve performance (Reeves, 2003). Most high poverty schools conduct

weekly assessments of student progress. It is important to note that these assessments were not

district or state tests, but were assessments constructed and administered by classroom teachers

to not only assess performance, but growth that was tailored to individual needs (Kannapel &

Clements, 2005). The consequence of students performing badly was not an admonishment to

"Wait until next year" but rather the promise that "You can do better next week" (Reeves, 2003).

This practice establishes data that teachers can use to diagnose learning issues immediately to

provide instant assistance to students who are struggling. In short, ongoing, diagnostic

assessment offers schools what McGee (2004) called an "internal capacity for accountability."

There are six school factors common among the poor that significantly affect the health

and learning opportunities of children, and accordingly limit what schools can accomplish on

their own: (1) low birth-weight and non-genetic prenatal influences on children; (2) inadequate

medical, dental, and vision care, often a result of inadequate or no medical insurance; (3) an

inadequate food supply; (4) environmental pollutants; (5) family relations and stress; and (6) neighborhood characteristics (Berliner, 2009). These out of school factors cause learning difficulties which have their beginnings in physical health impairments, cognitive, emotional, and behavioral problems (Brooks-Gunn, Duncan, 1997). We can never reduce the achievement gap between poor and non-poor children, between black and white children, or between Hispanic and Anglo children, unless out of school factors that positively or negatively affect achievement are more equitably distributed (Berliner, 2009). The working poor are the largest group of people in the United States, not poor people (Lott, 2001). Working poor people are generally employed in low paying, low skilled jobs with few benefits. Working mothers below the poverty level are typically employed in jobs paying less than $8 per hour as secretaries, clerks, waitresses, cashiers, and childcare workers (Lott, 2001). When working single mothers are faced with poor job prospects and difficulties in obtaining stable employment, they are less able to provide their children with the home environments and levels of support necessary for optimal child development (Trzcinski, 2002) and success in school. High mobility rates at high poverty schools are another factor difficult for schools to manage. Staresina (2003) noted that mobility's effects on student achievement are potentially substantial. Mobile students experienced an array of issues other than academic difficulties. The disruption of learning, gaps in content, behavioral problems and social difficulties result in mobile students being at a greater risk for dropping out of school.

Tableman and Herron (2004) proposed several components necessary for schools with high poverty rates to be successful. First, high poverty schools should have strong leadership personnel. The main focus of the principal and leadership team should be on creating an instructional model that promotes student learning and a school improvement plan that targets

areas of weaknesses for the school (Kannapel & Clements, 2005). The leadership of the school

is responsible for securing resources for teachers so that there are no excuses for learning not to

occur in a myriad of ways. Effective school leaders gather science experiment equipment,

reading materials, math manipulatives, and resource personnel in order to assist students. There

are no boundaries to what should be addressed when putting into place what teachers need to do

their jobs effectively. Another vital aspect of strong leaders' roles is to provide opportunities for

educators to collaborate and plan for optimal student growth (Kannapel & Clements 2005,

Ragland, 2002). This second area is crucial for planning so that students can have additional

time for learning and teachers for instruction as well as providing support for teachers that are

having difficulties teaching or handling student issues. Educators must be allowed to collaborate

and work together. School leadership must provide opportunities for educators to cross grade

level plan as well as to plan within their own grade levels to align what is to be taught with state

or national standards, and also in a manner that addresses the needs of the students (Lauer,

2001).

High poverty schools also must develop strong mission statements. Meaningless words

on paper are ineffective in addressing the individual needs of a school. In high poverty schools,

there must be collaboration between all stakeholders in the community in order to address the

needs of that school. Those needs must be stated effectively, revisited often, and addressed

constantly (Tableman & Herron, 2004). There must be a sense on the part of the community that

the school will succeed at all costs. High poverty schools are successful when everyone is a

team player. All those involved must have a desire to see the school grow and advance from the

academic needs of the students to their social and emotional growth (Kannapel & Clements,

2005, Ragland, 2002).

Successful high poverty schools have realized that one of the most important facets of school success is building positive relationships with the parents of the children in the school. Greater parent involvement is achieved by overcoming a teacher versus parent-student mentality. Educators realize that they cannot do their job without working with the parents of the children they serve (Barth, 1999). Educators in high poverty schools take the next step through measures ranging from providing resources for parents such as school supplies, to assisting parents in understanding the material that is to be taught to their child. Effective educators not only contact parents when there are problems with a child at school, but they make a concerted effort to find positive qualities to praise in every child.

Parental input in high poverty schools, through such mechanisms as annual focus groups, written surveys, telephone calls, or a school council, also assists the school in successfully meeting the needs of the students. Teachers and staff at these schools view parents as "critical partners" in the learning process (Ragland, 2002). It is vital that schools reach out to parents, whose input about their child's education, though at times limited, is necessary. Parents must be made to feel important and needed. Community agencies that can provide services to schools in accordance with the school's overall plan are also great building blocks to the success of high poverty schools (Tableman & Herron, 2004). Organizations such as Big Brothers and Big Sisters, fraternities and sororities, churches, and local colleges can provide mentors, tutors, and resources that are needed for the attainment of the goals of the school as well as the need of each individual child.

According to Kannapel and Clements (2009), high expectations are necessary for high poverty schools to be successful. High standards begin with the administration and continue throughout the school. Principals should continually be trained in new methods and their skills

refined to meet the needs of the twenty-first century learner. Carter (2000) asserted that the presence of a strong principal who holds everyone to the highest standards is the most notable factor in creating a high-performing school. Educators should also be required to improve and learn new innovative techniques. Proven strategies and teaching methods should be utilized throughout the day with all children. Finally, high expectations must also be placed on the students and parents. The message that the school is a place of excellence and learning is a priority. The culture of high expectations Haberman (1999) calls a "common ideology" that lends the school a unity of purpose and a sense of identity. Students must not be allowed to fail, turn in incomplete assignments, or refuse to participate in school activities. Requirements must be made of parents. They must know that they are to follow the strategies given to them by the school to meet and achieve the goals that have been set for their children.

An additional component to successful high poverty schools is respect and relationship building. Haberman (1999) identified the ability of teachers to forge relationships with children in poverty and connect with them as the key factor in high-performing schools. Educators and parents must be on the same team and show mutual respect for each other. When problems arise, parents and educators should work together to solve the issue for the child, whether it is emotional, social, or academic. Educators must treat each child as a unique individual and address their problems as such. The school atmosphere should be positive and administrators and educators must have constructive relationships that are open and accomplish the mission of the school (Kannapel & Clements, 2005).

High poverty schools that are academically successful have a strong instructional focus. The main emphasis is on academics, teaching, and student learning. Student assessment is also a central focus of the school. An analysis of educational leadership studies (Marzano, Waters, &

McNulty, 2005) corresponds with the importance of the school leader, reporting a significant correlation between leadership and student achievement. Studies of effective urban schools identified several strategies and factors that improved student performance, among them were consistent leadership with an emphasis on student achievement, continuous professional development, and data driven assessment (Shannon & Bylsma, 2004).

> Successful poverty schools pay close attention to their performance on state assessments, but the results from the state test are just a starting point. Each school has a system in place to regularly assess the progress of individual students and a plan to change instruction to meet their students' needs (Kannapel & Clements, 2005, p.3).

Weekly and daily monitoring is important to the success of each student. Educators design lessons for students who struggle with concepts and refuse to allow them to move on without a greater depth of understanding on currently taught material.

Leadership styles vary significantly at successful high poverty schools, but all share a collaborative decision-making process. Effective high poverty schools do not have authoritarian or dictatorial leaders (Kannapel & Clements, 2009). The faculty, staff, parents, and stakeholders are all involved in making most key decisions for the school. Decisions are discussed and collaborative conclusions are made, carried out, and monitored for modifications (Feldman, 2003). Students are also made leaders within the school. Students from high poverty homes frequently do not have models of positive leadership behaviors. High poverty schools give students opportunities to be exposed to positive role models (Payne, 2008). Students learn powerful practices as peer helpers, student government officials, and shadowing mentors outside of the school who hold positions within the communities as government leaders. These

opportunities teach children not only skills of how to govern outside their homes, but life skills that will help them navigate in a world that may be quite different from their own.

In Indianapolis, five schools have succeeded in spite of overwhelming poverty and other obstacles by handling their problems with simple solutions. One strategy that these schools employed was making every minute count. Students were routinely quizzed and had discussions about their day while waiting in lines for lunch and during transitional times. The wasted times during lunch in which students often discussed unimportant matters were eliminated. Instead, enriching moments were implemented where videos of academic learning were shown, students discussed lessons with teachers, and question and answer periods were enacted in fun and diverse ways (Elliott, 2012). The schedules at these schools were also adjusted to get rid of students waiting in lines and bottlenecks in student movement around the building. Two doors were put on some classrooms, such as art, so that one class could go in one door while another class exited the other door. This enabled the next teacher to immediately begin teaching, and there was no wasted time or arguments and fighting between classes.

Another valuable aspect of making every minute of the instructional day count was the institution of flex time or extended learning periods (Steinberg, Johnson, & Pennington, 2006). In high poverty schools, students who are behind academically usually lose their art, music, and physical education classes for remediation and skills classes. Once every nine weeks students participated in a flex time activity that exposed them to learning about another culture and country in the world (Elliott, 2012). This time allowed for teachers to be trained in new innovative techniques to assist their children in achieving high academic goals as well as allowing for all children to participate in extracurricular activities (Stronge, 2007). No children

missed flex time. Discipline issues at these schools have decreased because students enjoy their flex activity and are still in an enriching learning atmosphere.

The second aspect contributing to the remarkable accomplishments in these schools is the commitment to keeping standards high despite change. Students learn more when they are challenged by teachers who have high expectations for them, encourage them to identify problems, involve them in collaborative activities, and accelerate their learning (Burris & Welner, 2005). In a time in which communities are changing with an influx of immigrants and there are language barriers for students who constantly move due the economic crises of our time, schools must make adjustments (Elliott, 2012). In these schools, despite what is going on in the world, the curriculum is the curriculum and all students are responsible for learning the state standards. No excuses are made on the basis of the children's circumstances, but rather strategies and solutions for problems are put in place. Hodgkinson (2007) highlighted another model—the Schools of the 21st Century—that regarded students as whole persons in their family context. If students are constantly late, someone picks them up. If English is not a student's primary language, principals get community volunteers from the local colleges to come in and train teachers and students on how to communicate with these students effectively. Teaching and learning are more effective when they are contextualized in the experiences, skills, and values of the community and when learning is a joint productive activity involving both peers and teachers (Tharp, 1992). Home visits are required not only to discuss the child's problems but to come up with answers to solve them (Elliott, 2012). Parents often do not know how to help their children with academic content, so parents are given training in how to do so. Sheldon and Epstein (2005, p.2) found that when teachers involve families in subject-specific interventions in reading and related language arts, "students' reading skills and scores are positively affected."

The success of high poverty schools in Indianapolis also depended on understanding the problem before trying to fix it (Elliott, 2012). These schools are richly data driven. Mandates of equity and accountability have made it imperative that educators base decisions on accurate and meaningful data about student learning and achievement (Johnson, 2002; Lachat, 2002). Incomplete homework caused many students to be disciplined, at one research site. The solution was to analyze the assignments and make them more engaging and relevant to what was learned during the day. The incidences of write-ups for no homework decreased significantly. Coincidently, the same problem was occurring for students who were always late: penalties were being accumulated for students who had more than three tardy notices. After analyzing what was going on, steps were implemented to assist these students in getting to school on time. The same steps were taken for student academic data. Effective high poverty schools address obstacles to learning, collaborate to identify solutions, and take part in school-wide intervention strategies. High-performing schools may also set aside significantly greater collaborative planning time (Feldman 2003). If a student was failing reading, teachers were required to look at the reasons for this instead of simply stating that the child could not read. Measures were put in place to design vocabulary strategies and activities that would help raise reading scores, especially with nonfiction texts, which students from poverty often struggle to comprehend (Elliot, 2012).

Finally, the most important thing that all these Indianapolis schools had in common was the leadership of the principal. The principal of these schools provided clear direction, offered strong support, and cleared roadblocks (Elliott, 2012). These principals realized that support for teachers is the foundation for a great school. Effective leaders offer their teachers intellectual stimulation and individualized support (Leithwood & Riehl, 2005).There are times for problems

to be addressed and other times in which kind words must be shared with those in which you lead. Teachers as well as students need to feel as though their leader has their best interests at heart and need to be heard and supported. Leaders develop and communicate shared goals, a sense of common purpose, and high performance expectations (Marsh, 2002; Petrides & Guiney, 2002). Everyone must be cognizant of what drives the actions of the school, and these things must be at the forefront of everyone's actions. Segmented schools in which everyone is working on different causes will not work. There must be unity among the staff that focuses on the goal that every child accomplishes mastery of the curriculum (Blankstein, 2004). Effective schools and their teachers have many of the same characteristics.

Characteristics of Effective Educators

Parents have always known that it matters alot which teachers their children get. That is why those with the time and skills to do so work very hard to ensure that, by hook or by crook, their children are assigned to the best and most effective teachers (Haycock, 1998). Effective educators of children in poverty have several characteristics. These teachers possess strong content knowledge, develop high order thinking skills, and cultivate strong relationships with students. Additionally, they demonstrate effective classroom management skills.

First, according to various studies, teachers with strong verbal and math skills significantly impact student learning. Sutton and Kruger (2002) noted that, "As teachers pedagogical content knowledge increases within the context of a strong knowledge of mathematical content, their ability to impact student learning also increases" (p. 16). Hill, Rowan, and Ball (2005) investigated the extent to which mathematical content knowledge contributes to gains in first and third grade students' mathematics achievement. They found that teachers' mathematical knowledge for teaching was significantly related to student achievement

gains in both first and third grades. Other variables including teacher certification, number of mathematics courses completed, and years of teaching experience were not found to be significant predictors of student achievement gains. Ferguson (1997), for example, has looked closely at the relationship between student achievement and teacher performance on a basic literacy examination (the Texas Examination of Current Administrators and Teachers (TECAT), which was administered to all teachers and administrators in Texas in 1986). Ferguson found a significant positive relationship between teacher test scores on the TECAT and student scores on the Iowa Test of Basic Skills (ITBS), with higher-scoring teachers more likely to produce significant gains in student achievement than their lower scoring counterparts (Ferguson, 1997, p. 32).

There is also a considerable amount of research that shows how important teachers' content knowledge is to their effectiveness with students, especially at the middle and senior high school levels (Haycock, 1998). Great teachers are always looking for opportunities to increase their own knowledge. They are data driven and know what it takes to move students academically (Heinze, 2011). These educators have enthusiasm and a high knowledge base for academic content, the students that they teach, and for the school in which they serve. A great teacher has a passion for learning and for the particular subjects they teach (Tableman & Herron, 2004). The teacher skillfully builds on what he or she already knows so that students are consistently challenged and deeply engaged (Heinze, 2011).

During the 1980s, researchers began to see the need to think about teacher knowledge in different ways and the types of teacher knowledge most related to teaching (Hill, Rowan, & Ball, 2005; Fennema & Franke, 1992). As a result, the idea of pedagogical content knowledge began to emerge as a model for describing the relationship between content knowledge and pedagogical

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knowledge. First described by Shulman (1986) in response to the existing emphasis on general pedagogical skills as a measure of effective teaching, pedagogical content knowledge represents the belief that content knowledge and pedagogy cannot and should not be treated separately. In fact, Shulman comments:

> Mere content knowledge is likely to be as useless pedagogically as content-free skill. But to blend properly the two aspects of a teacher's capacities requires that we pay as much attention to the content aspects of teaching as we have recently devoted to the elements of the teaching process (p. 8).

Shulman described this intersection of subject matter knowledge and pedagogy as the "missing paradigm" (p. 7).

The idea of pedagogical content knowledge is based on this belief that teachers need more than subject matter knowledge and general pedagogical techniques to be effective. Rather, effective teachers must know how to construct content in order to best teach it to students. They need to address; what makes learning specific topics challenging, what conceptions and misconceptions students will experience, and what specific teaching strategies can be used to address learning needs in a variety of classroom situations (Rowan, Schilling, Ball, & Miller, 2001; Shulman, 1986). Hill and Ball (2005) suggest pedagogical content knowledge supports the belief that "at least in mathematics, how teachers hold knowledge may matter more than how much knowledge they hold" (p. 332). They add that teaching quality might be more related to whether a teacher's knowledge is "procedural or conceptual, whether it is connected to big ideas or isolated into small bits or whether it is compressed or conceptually unpacked" (p. 332) than to the amount of gained knowledge.

Additionally, highly effective teachers challenge their students. This challenge is presented to students by, providing instruction that develops higher-order thinking skills (Goodwin, 2011). In effective high poverty classrooms, emphasis is placed on both basic skills and higher order comprehension (Knapp, Shields, & Turnbull 1995). These educators understand that higher-level questioning about content is more effective than heavy reliance on telling and recitation (Tableman & Herron, 2004). Effective educators rely on meaning-oriented rather than skills-oriented instruction. They identify difficult-to-teach and hard-to-learn concepts, and work collaboratively with other teachers to design authentic and meaningful learning experiences that engage students in their school work (Heinze, 2011).

James Comer (2001) indicates that significant relationships are indispensable for learning to occur. Effective teachers are not only accomplished instructors but also work to understand their students' personalities and needs and to develop and maintain positive supportive teacher-student relationships (Good & Brophy, 2000; Larrivee, 2005). Building a respectful relationship doesn't mean becoming the student's buddy. It means that teachers both insist on high-quality work and offer support (Payne, 2008). When teachers respect students of poverty and make them feel valued, learning cannot help but occur. Effective educators of children in poverty also create strong relationships with the parents of the children they teach. Educators view parents as their ally and someone who can assist them in teaching their child (Comer, Haynes, Joyner & Ben-Avie (1996). Effective educators understand how to get parents, who will sometimes fight the school, on their side for the success of the student.

Educators can be a huge gift to students living in poverty. In many instances, education is the tool that gives a child life choices. A teacher or administrator who establishes mutual respect, cares enough to make sure a student knows how to survive school, and

gives that student the necessary skills is providing a gift that will keep affecting lives

from one generation to the next. Never has it been more important to give students living

in poverty this gift (Payne, 2008).

Effective educators demonstrate strong classroom management skills, are proactive in

preventing disruptions, and are skilled in managing behavior that does not deter from learning

(Marzano, & Pickering, 2005). Jose Torres, superintendent of School District U-46 in Elgin,

Illinois says that, "According to students, good teachers are firm, but fair. They create great

relationships with students. They have a knack for creating a safe culture in the classroom,

where students are safe to risk learning" (Heinze, 2011, p.1). Highly effective teachers create

positive classroom environments. One of the strongest correlates of effective teaching is the

strength of the relationships teachers develop with students (Goodwin, 2011). While there are

consequences for wrong actions, correction by educators is done with love and respect and

opportunities for modifications of wrong behavior by students are always allowed (Goodwin,

2011). Effective educators establish rituals, routines, and procedures which have a great

influence on student achievement (Marzano, 2007).

A great teacher creates a respectful place where students' lives, languages, and cultures

are represented throughout the classroom. Routines and rituals provide a comfortable and

safe place for students to take risks and express their opinions and ideas (Heinz, 2011,

p.1).

Effective Teaching Strategies

Math Strategies

Systematic instruction and modeling are practices for students who struggle in math.

Research on mathematics interventions for low-achieving students noted that explicitly teaching

concepts and procedures improved students' mathematics achievement (Baker, Gersten, & Lee, 2002). Explicit and systematic instruction includes teacher models, instructional examples, scaffolding, feedback, and a cumulative review (Archer & Hughes, 2011). Explicit instruction is warranted during initial instruction of new content and when teaching students to generalize known content to new situations (Fuchs, 2003). Systematic instruction works well in small groups of students. "Small group instruction is suitable for a problem solving oriented curriculum that stresses understanding. When students participate in small groups; they can work together to solve more difficult problems" (Taylor, 1989, p.633). Systematic instruction in mathematics allows for concepts to be broken down into manageable parts for students. During this process, students taught by their teacher are allowed opportunities for discussion and practice. Frequent student response can help teachers in monitoring student understanding, and teacher feedback during student practice is a powerful tool for refining and mastering new concepts (Hattie & Timperley, 2007; Vaughn, Gersten, & Chord, 2000).

Visual and graphic representations are an effective tool in assisting students who struggle in math. A review of math interventions supports the use of visual models by teachers and students (Gersten, Chard, Jayanthi, Baker, Morphy, & Flojo, 2009). Students struggling with mathematics often have difficulty grasping the relationship between mathematics representations and abstract symbols (Fuson, 1988). "Concrete-to-representational-to-abstract sequenced instruction is a proven pedagogical strategy for increasing mathematical understandings and abilities (Witzel, Mercer, & Miller, 2003). Teachers who presented graphic depictions of problem-solving with multiple examples and had students who practiced using their own graphic organizers had increased achievement levels as opposed to students who did not have this practice or guidance (Gersten & Clarke, 2006). Visual and graphic representations can take

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various forms from games, base ten blocks, fraction tiles, charts, tally marks, to pictorial graphics. Higgins, Smith, and Wall (2005) found primary students were more likely to be engaged in the learning process because they enjoyed playing mathematical games on the interactive whiteboard. Students also claimed that they were more motivated to learn because learning was now fun in all subjects, but especially mathematics (Higgins, Smith, & Wall, 2005).

Math student think-alouds and literature provide opportunities for students to learn mathematics in a new ways. "Connecting math to literature can boost the confidence of those who love books, but are "math-wary"" (Burns, 2005, p.27). Read-aloud selections are chosen to develop mathematical ideas and concepts. Through this process, mathematics becomes familiar; its relationship to the arts is emphasized, while picture books and extension activities stimulate positive reactions, interest, enjoyment, and confidence in children (Columba, 2005). According to Van de Walle (2007), story problems are a good way to help students understand operations and make connections among mathematical operations. Research has shown to increase student achievement improvements must be made in literacy (Topping, 2005). Bringing mathematics and literature together is practical in that it can assist the teacher in integrating the curriculum (Griffiths & Clyne, 1988; Karp, 1994; Hong 1995; Welchman-Tischler, 1992). Teaching mathematics through children's literature can integrate learning experiences. Literature gives children learning experiences to share their thinking and to practice using mathematical language related to the situations in the story, helping them connect informal oral language and the formal symbolic code of mathematics (Griffiths & Clyne, 1988; Satariano, 1994; Raines & Canady, 1990).

Peer assisted learning activities occur when students work on assignments, usually in pairs. Peer tutoring works well when students of varying ability levels work together (Kunsch,

Jitendra, & Sood, 2007). Slavin (1990) concluded that cooperative methods were effective in improving student achievement and the most effective methods emphasized both group goals and individual accountability. As students work one-on-one with each other, academic engagement for these students increases (Greenwood, 1991; Olmscheid, 1999). Peer tutoring can also be beneficial in helping students to retain more information (Greenwood, 1993). One-on-one instruction is invaluable in closing the achievement gap. Findings by Juel (1996) and Ross (2008) support the fact that the lower the ratio of student to teacher, the more effective the tutoring or grouping. Researchers are also using peer influence to produce effective classroom-based learning interventions in urban settings (Slavin, Karweit, & Madden, 1989). Collaborative learning interventions have shown promising results in increasing student achievement for low-income, low-achieving students (Fantuzzo & Rohrbeck, 1992; Greenwood, Terry, Utley, Montagna, & Walker, 1993). Finally, students engaged in peer tutoring display more positive feelings towards school in general (Webb, 1988).

Common Strategies

There are many diverse teaching strategies that effective teachers of children from poverty utilize daily for the success of their students. Many of the same strategies can be used to teach a variety of subjects. Some of these strategies include questioning, cooperative learning, hands on activities in math with applicable experiences, and continuous practice by demonstrating skills learned. Educators use of graphic organizers, vocabulary strategies, and peer tutoring assist in the successful outcomes for students.

Educators of children of poverty must demonstrate what strategies and procedures good readers adopt in order to read well. Children of poverty need to see what kinds of strategies a reader should use while they read. These strategies include connecting personal experiences with

the text, visualizing the text, asking questions, looking up unknown words, and or trying to figure out the meaning of a word using its context (Walker, 2009).

One effective strategy for high poverty students to use is the process of questioning. Questions are a principal tool with which to gain access to information, and knowing how to ask questions yields a huge payoff in achievement (Marzano, 2007). In their research on reading, Palincsar and Brown (1984) found that students who couldn't ask good questions encountered many academic difficulties. When an individual is learning something new, learning should happen in a supportive context. Teachers should help all students feel part of a collaborative culture (Payne, 2008).

Marzano, Pickering, and Pollock (2001) note that the process of identifying similarities and differences appears to be "basic to human thought"; attaching new information to existing knowledge and memories is, after all, the heart of learning. However, research shows that novice learners often fail to make connections between what they are learning and what they have already learned (Gentner, Loewenstein, Thompson, & Forbus, 2009). Effective educators of children from poverty also know that teaching children how to summarize information and take notes will assist them in academic achievement. Weeding out extraneous information in order to make room for new knowledge is vital in summarizing information (Medina, 2008). Good teachers understand that educators' reinforcing effort and providing recognition is extremely important to help students develop a growth mind-set and intrinsic motivation to learn (Goodwin, 2011). Research makes a strong case for the value of reinforcing and recognizing effort. Effective educators understand the importance of student effort and providing recognition helps students develop an intrinsic motivation to learn (McKeachie, 1999).

Effective educators understand the value of substantive homework and practice. Although sometimes maligned, homework and practice have benefits for learning when teachers understand when and why to give at-home and in-class assignments. As Marzano, Pickering, and Pollock (2001) note, homework can serve two key purposes: letting students practice newly acquired skills and deepening their knowledge of new concepts. According to Goodwin, who reviewed research on homework, "Homework probably works best when the material is not complex or extremely novel" (Goodwin, 2011, p.2). Therefore, homework should probably not be used to teach new or complicated concepts. Homework and practice also provide educators with the opportunity to see where students are struggling and correct their misconceptions.

The uses of nonlinguistic representations are also a useful strategy for educators who work with children from poverty. Medina (2008) writes that "vision trumps all other senses" (p. 221). Human beings are visual learners, which has profound implications for teaching and learning. Medina notes, for example, that "if information is presented orally, people remember about 10%, tested 72 hours after exposure. That figure goes up to 65% if you add a picture" (p. 3). Thus, nonlinguistic representations can be used in the classroom to tap into students' predisposition for visual-image processing, helping them to better recall new information later.

Cooperative learning represents a valuable strategy for helping students attain high academic standards (Kagan, 1992; Cohen, 1994). Research suggests that when cooperative learning works, it does so because it gives students an opportunity to "talk through" material with their peers and thus learn more deeply than they might through individual reading or listening (Johnson & Johnson, 1999). By talking through material, students become more conscious of the strategies they use to get to an answer and thus become better able to retain new

knowledge and skills. In addition, students can be more motivated to learn when a sense of solidarity develops among the group.

Cooperative learning is a highly effective method when working with children of poverty. There are a number of specific cooperative learning activities or methods that have been employed with success by teachers in poverty classrooms. One example is the "Think/Pair/Share" method, in which students are first asked to think individually about a topic (Allison & Rehm, 2007). They are then paired up and asked to share information with each other. After the pair has discussed the topic, they are asked to share the information with the entire class or another group of students. Another example is the "Jigsaw" method, in which a unit of material is first divided into a number of different sections or components (Aronson & Patnoe, 2011). Students are in this activity again divided into groups. Each group then teaches the content they have learned to the whole class, and the component parts are put together like a jigsaw puzzle to complete the study of the material (Carroll, 1986). These methods, and other cooperative learning activities, offer unique opportunities for positive social interactions and interpersonal communication between students from different backgrounds in diverse classrooms, thereby providing the basis for real dialogue, mutual understanding, and positive learning outcomes (Johnson, Johnson, & Holubec, 1994; Slavin, 1990; Wlodkowski & Ginsberg, 1995).

Children from poverty value deeply the use of hands-on activities when educators are teaching concepts in class (Walker, 2009). Furthermore, hands-on materials and visuals that students can manipulate and engage with via a variety of senses help to make learning more meaningful, especially for diverse students who tend to be tactile and kinesthetic learners (Bruno, 1982; Curtin, 2006). Based on the findings that many students of poverty favor tactile

and kinesthetic learning styles, Honigsfeld and Dunn (2009) have advised educators to include

activities requiring students to use their hands and bodies as well as to stand on their feet, as

these children "are more likely to internalize comprehensive information while using small- and

large-motor movements" (p. 221).

Kuykendall (2004) found that the learning styles of at-risk black and hispanic minorities

were more likely to be people-oriented (in that they seek a personal interaction with teacher) and

field-dependent (in that they learn better in a student-centered and personal environment) and

recommended matching teaching styles accordingly. Regarding learning strategy, Johnson

emphasized the importance of providing learning strategy instruction to at-risk students, as they

are less likely to develop these critical tools on their own.

Educators of children from poverty must also teach vocabulary. Research shows that

students from at-risk homes have significantly fewer words in their vocabularies than their age-

mates from secure homes. Children's vocabulary competence is influenced by the mother's

socio-demographic characteristics, personal characteristics, vocabulary, and knowledge of child

development (Bornstein, Haynes, & Painter, 1998). By the time most children begin school, they

will have been exposed to 5 million words. By high school, they should know about 60,000 to

100,000 words (Huttenlocher, 1998). As opposed to low-income homes. Weizman and Snow

(2001) found that low-income caregivers speak in shorter, more grammatically simple sentences.

There is less discussion, fewer questions asked and fewer explanations given. As a result,

children raised in poverty experience a more limited range of language capabilities. Educators

must take time to demonstrate how to figure out a word's meaning using context clues from the

surrounding text (Walker, 2009). Teaching specific terms in a specific way is probably the

strongest measure a teacher can take to ensure that students have the background academic

knowledge they need to understand the content they will encounter in school (Walker, 2009).

When all the teachers in a school focus on the same academic vocabulary and teach it in the

same way, the school has a powerful comprehensive approach; when all the teachers in a district

embrace and use the approach, it becomes even more powerful (Marzano & Pickering 2005).

In science, some words are best learned in context; for example, if students are studying

parts of a flower, "stigma" and "sepal" would probably be best taught in context with the more

familiar terms "petal" and "stalk" (Jorbrack, n.d). Other words are best taught in categorization.

Some words are best understood when they are related to words that are similar or opposite in

meaning (Jorbrack, n.d). Word parts and word derivations are valuable tools in making sense of

new vocabulary. Knowing that one word is related to another similar word may help in

deepening understanding. Math has an abstract vocabulary unique unto itself. Researchers have

reported a relationship between success in reading mathematics and specific reading strategies,

including knowledge of technical vocabulary (Gullatt, 1987). Therefore, teaching vocabulary in

math is helpful in students understanding procedural and conceptual concepts. Harmon, Katims,

and Whittington (1999) studied the use of social studies learning strategy identified by the

acronym PEP, which stands for ''person, event, or place''. This strategy assists students in

learning required content through vocabulary based instruction.

Educators must also create fill-in-the blank charts, story-flow charts or other graphic

organizers that students can complete as they are reading the text. These learning tools help

students synthesize and process what they are reading, which improves comprehension (Walker,

2009). Pictures, cartoons, maps, graphs, charts, diagrams, videos, and other multimedia

resources enhance learning because they engage different senses, accommodate visual learners,

and help reinforce key ideas by presenting information in alternative formats (Carrier, 2005).

Teachers can develop their own visuals such as bulletin boards, graphic organizers, flash cards, games, and handouts that include pictures and symbols that correlate with specific lessons. The use of multiple and varied visual aids can also capture the interest of active middle school students who require frequent stimulation to keep them engaged in learning (Allison & Rehm, 2007).

Peer tutoring is an effective teaching strategy for children from poverty. For the tutor, peer tutoring enhances the development of leadership and interpersonal skills, self-confidence, and self-esteem. It also offers the tutor the opportunity to work one-to-one with a peer who is performing at a different level of achievement, facilitating a new appreciation and understanding of others who may be different (Webb, 1988). Peer tutoring can be implemented in any subject area and may be used to conduct experiments, revise and complete assignments, practice new skills, review for tests, solve problems, and gather information (Vaughn, Bos, & Schumm, 2003). Most young adolescents welcome the opportunity to work with a classmate because of learning style preferences and because peer tutoring is more fun than working alone (Carbo & Kapinus, 1995).

Resilience

According to Masten and Coatsworth (1995), "resilience is achieving desirable outcomes in spite of significant challenges to adaptation or development" (p. 737). Resilience is a term that is most meaningfully applied to persons who are exhibiting successful adaptation even though their environment (or prior experiences) has placed them at heightened risk for maladaptive outcomes (Buckner, Mezzacappa, &Beardslee, 2003). Self-regulation skills are a powerful independent predictor of resilience. Self-regulation also comprises emotion regulation. Youths with good emotional regulation skills are adept in the management of their emotional

states (Buckner, Mezzacappa, &Beardslee, 2003). These children rarely explode in bursts of anger and present stable moods. These children are capable of controlling their and, display their emotions and feelings in behaviors that are easily accepted by others.

According to Werner (2005), resilient youth of poverty developed a sense that obstacles were not insurmountable and believed that they had control over their fate. They had a high degree of self-esteem and self-efficacy and many developed a special skill or hobby in which they could succeed (Seccombe, 2002).   Individual characteristics of resilient children typically include an internal locus of control, high self-esteem, high self-efficacy, and autonomy (Wang, Haertel, & Walberg, 1994). Resilient children also are actively engaged in school (Finn & Rock, 1997), have strong interpersonal skills, maintain healthy expectations, and have a high level of activity. Resiliency can be cultivated, according to the research, through a child's solid, meaningful connection with just one very caring individual (Benard, 1991).

Key characteristics of resilient families of children in poverty include warmth, affection, commitment, and emotional support for one another (Seccombe, 2002). If parents are unable to fulfill these needs for children, others may step in to become surrogate families for children living in poverty. In some cases, non-parental adults such as mentors or older siblings also served as educational supports for resilient children, both formally and informally. Frequently, children had older siblings who had succeeded in school and encouraged them to succeed as well (Eisemen, Cove, & Popkin, 2005). A child may connect with the right important individual in school, at church, at a youth or family center, at 4-H activities, or at a local clinic or agency. These people, in whatever capacity the child relates to them, become mentors (Cecil & Roberts, 1992; Flaxman, 1992).

Community institutions are important components to raising resilient youth in poverty. Blyth and Roelkepartian (1993) indicated several key community strengths. First, a strong community has opportunities for participation in community life. Youth can participate in extracurricular activities in school, religious youth groups, scouting, or other activities that help bond them to their communities. In these settings youth can learn important skills such as teamwork, group pride, or leadership. Participation in after-school activities may decrease the potency of environmental risk factors such as violence, drug activity, and gangs by reducing children's exposure to these negative influences (Eisemen, Cove, & Popkin, 2005). Some organized activities may also improve children's social skills and self-efficacy, ultimately contributing to positive social adjustment in adulthood (Werner & Smith, 1989). Resilient children also emphasized the positive aspects of their environments, including having friends and family nearby, neighbors who watched out for one another, and having block parties, all added to a sense of community (Eisemen, Cove, & Popkin, 2005).

A common finding in resilience research is the power of educators to tip the scale from risk to resilience (Benard, 1991). Lifton (1994) identifies resilience as the human capacity of all individuals to transform and change, no matter what their risks. Effective educators and mentors provide and model protective factors that buffer risk and enable positive development by meeting youth's basic needs for safety, love, belonging, respect, power, accomplishment, and learning (Benard, 1991). Educators can convey loving support to students by listening to them and validating their feelings. They can also demonstrate kindness, compassion, and respect (Higgins, 1994; Meier, 1995). Educators who refrain from judging, and who do not take students' behavior personally, understand that youth are doing the best they can, based on the way they perceive the world. Educators' high expectations can structure and guide behavior, and

can also challenge students to strive beyond what they themselves believe they can do (Delpit, 1996). Effective educators recognize students' strengths (McTighe & O'Connor, 2005), which allow them to find areas in which they can be successful.

Educators can promote resilience among at-risk children by teaching to their strengths, instead of their deficiencies; this method helps to foster their intrinsic motivation and positive momentum. It also keeps them in a hopeful frame of mind to learn and work on problems (Benard, 1991). Educators who show students that they have the power to construct the meaning they give to everything that happens to them are the ones who change the lives of at-risk students. These educators help students recognize how their own conditioned thinking internalizes environmental messages, such as that they are not good enough or smart enough, and blocks access to their resilience (Mills, 1991).

Culturally Relevant Pedagogy

Culturally relevant pedagogy as a bridge between home and school cultures (Howard, 2003) allows teachers of ethnically diverse populations to incorporate the values, experiences, and perspectives of their students' cultures into the curriculum (Gay, 2002). Moreover, teachers who implement culturally relevant pedagogy are able to "empower students intellectually, socially, emotionally, and politically" (Ladson-Billings, 1992, p. 382). Culturally relevant pedagogy has two main purposes. First, culturally relevant pedagogy draws on students' home cultures as a mechanism for helping them achieve success in school. Second, through culturally relevant pedagogy educators enable their students to think critically about the injustices inscribed in schools and broader society (Esposito & Swain, 2009). In an attempt to gain students' perspectives on culturally relevant teaching, Howard (2001) found that there were three educator characteristics that were most important to students, such as possessing a caring attitude, the

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ability to build community within the classroom, and the ability to engage the students in the learning process. Culturally relevant educators and their pedagogical practices have positive effects on culturally and ethnically diverse students, both academically and socially (Esposito & Swain, 2009).

 Gay's (2000) and Howard's (2003) descriptions of culturally relevant pedagogy entail connecting learning and classroom experiences to children's home discourses and experiences. Educators should develop learning activities that are more reflective of students' backgrounds and create integrated units around universal themes (Sheets, 1999). To do this effectively, Ladson-Billings (1994) reports that teachers and schools must first believe that all students can succeed. They must also maintain an affirming student-teacher relationship with all children, and use multiple forms of assessment.

Hilliard (2000, 2006) further notes that schools should abandon the typical deficit perspective evidenced in such labels as "at risk" and disadvantaged, and instead view their roles as awakening the natural genius in students.

> Deficit thinking is a theory that posits that a student who fails in school does so
>
> principally because of internal deficits or deficiencies. Such deficiencies manifest, it is
>
> alleged, in limited intellectual abilities, linguistic shortcomings, lack of motivation to
>
> learn and immoral behavior (Valencia, 1997, p. 2).

Culturally relevant teaching sees excellence as a complex standard that takes student diversity and individual differences into account. Educators and programs with culturally relevant practices help students make connections between their community, national, and global identities (Durden, 2008). They also encourage children to collaborate and expect them to teach and take responsibility for each other (Ladson-Billings 1994, 1995).

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Open and equal access to quality learning opportunities has long been seen as the key to narrowing the racial, ethnic, and socioeconomic achievement gaps. It is important to understand that culture has been a key factor in determining this access (Edward, n.d.). Research has shown how poor health and nutrition inhibit child development and learning and, conversely, how high-quality early childhood and preschool education programs can enhance them (Ladd & Fiske, 2011). The importance of early exposure to rich language on future cognitive development and the fact that low-income students experience greater learning loss during the summer when their more privileged peers are enjoying travel and other enriching activities are widely recognized. Since poverty itself cannot be eliminated, educators should try to provide disadvantaged students with the social support and educational experiences that middle-class students enjoy (Supiano, 2013). In North Carolina, the East Durham Children's Initiative, now in its second year, is one of many efforts being made around the country to replicate Geoffrey Canada's well-known successes with the Harlem Children's Zone. Say Yes to Education in Syracuse, NY, supports access to afterschool programs and summer camps and places social workers in schools (Ladd & Fiske, 2011). In Omaha, Building Bright Futures sponsors school-based health centers and offers mentoring and enrichment services. Citizen Schools, based in Boston, recruits volunteers in seven states to share their interests and skills with middle-school students. Promise Neighborhoods, an Obama administration effort that gives grants to programs like these, is a welcome first step, but it has been under-financed (Ladd & Fiske, 2011).

The second building block of culturally relevant instruction is a commitment to cultural competence. Culturally competent teachers are adept at utilizing students' cultures as a vehicle for learning and provide students with a curriculum or learning experiences built on their prior knowledge (Edward, n.d.). Students from minority cultures may feel pressured to disavow

themselves of their cultural beliefs and norms in order to assimilate into the majority culture. This, however, can interfere with their emotional and cognitive development and result in school failure (Sheets, 1999). In order to counteract this failure, issues and topics related to the students' background and culture should be utilized in the classroom to challenge students and to develop their higher-order knowledge and skills (Villegas, 1991). Culturally relevant instruction helps students to develop a deeper understanding through engaging with the world and others critically. Students are encouraged to interrogate "the cultural norms, values, mores, and institutions that produce and maintain social iniquities" (Ladson-Billings, 1995). This concept is closely related to that of "critical literacy," whereby learners adopt critical perspectives toward texts (songs, poems, novels, conversations, pictures, movies etc. are all considered texts), questioning the power relations and knowledge represented therein (Edward, n.d.).

Effective teachers are necessary for the diverse and evolving groups of students that they will encounter throughout their careers. Each effective teacher has unique characteristics which ultimately lead to high levels of student achievement. Students who live in poverty need the most effective teachers in order to be competitive in a global society. When effective teachers, who teach high poverty students, use various teaching strategies, build relationships with their students, and integrate their unique individual cultures and gifts in the learning process success will occur.

Definitions

Effective Teacher - An effective teacher is one who focuses on students' learning outcomes. He or she demonstrates several key behaviors in teaching and student learning. These areas include lesson clarity, relationship building, provoking higher order thinking skills, engagement in the learning process, and student success (Borich, 1992).

Chapter 3: Methodology

Introduction

The rigor of qualitative research methodology has long been debated, particularly with regards to the validity and reliability of such methods. A large body of research, scholarly argument, and epistemological tradition challenges the use of rich narrative data in examining and understanding what is happening, why it is happening, and what it means in a given situation, event, or setting. Such debate is healthy and suggests that the researcher's philosophical tradition and stance takes on an importance equal to that of the data itself. However, as Patton (1990) points out, the methods of qualitative research now stand on their own as viable ways to explore what is happening in particular settings and educational programs. The issue of whether qualitative inquiry should be undertaken with the same frequency as traditional quantitative research methods is beyond debate—qualitative research methods have proven themselves to be both feasible and useful.

Grounded Theory

Grounded theory was utilized in this research. According to Strauss and Corbin (1990), grounded theory is a qualitative research approach that uses a systematic set of procedures to develop and inductively derive information about a phenomenon. Grounded theory is a qualitative methodology created by Glaser and Strauss (1967) for the purpose of explaining social phenomena. Arising out the philosophic tradition of symbolic interactionism, "…grounded theory aims to: generate a theory that accounts for a pattern of behavior which is relevant and problematic for those involved." (Glaser, 1978, p. 93) The aim of grounded theory research is to

create a theory from data rather than force-fitting data to a theory and hypotheses (Corbin &

Strauss, 2008). By formulating theory within this approach, the theory is so intimately tied to the

data, the consequential theory is likely consistent with empirical observation (Eisenhardt, 1989).

The goal is to develop a rich, descriptive and explanatory theory rather than give an objective

and static account of the phenomenon (Olikowski & Baroudi, 1991). The major objective of this

research is to build theory from the data (Olikowski 1993; Corbin & Strauss, 2008); however, the

intent is to not only to describe a phenomenon, but also to address how of the phenomenon

within a school is used to assist student growth and development as well as how it cultivates

student-teacher relationships. The grounded theory approach is described in terms of three basic

components: theoretical sampling and site selection, data collection, data analysis, and validation

(Corbin & Strauss, 2008; Glaser & Strauss, 1967; Strauss & Corbin, 1990; Strauss & Corbin,

1998).

Research Setting

The site of my study is a Pre-K through 5th grade elementary school in a low-income

section of a suburban school district in the southeastern region of the United States. The school

was built during the 1950s in the southern section of the city. Recently, the area in which the

school is located has been undergoing an urban renewal with the assistance of local, state, and

federal funding. It has a student body of approximately 412 students, all of whom qualify for

free or reduced-price lunch. African-American students account for 96% of the student body,

followed by those of mixed heritage at 2%, and Caucasian and Hispanic students comprising the

remaining 1%. The school did achieve Adequate Yearly Progress status for the 2011 and 2012

school years. Recently, the school underwent a merger with another school due to the financial

constraints of the district that was caused by the economic downturn of the country as well as the close proximity of the schools to each other.

Participants

Purposeful sampling

"Participants are the ultimate gatekeepers. They determine whether and to what extent the researcher will have access to the information desired" (Hatch, 2002, p. 51). The participants chosen for this study are considered to be highly effective according to several criteria. First, they have consistently achieved Adequate Yearly Progress according to their classroom test scores. In the school data room, test scores by grade level and by individual teachers are posted. The lists are posted for the past three years in the area of Reading and Mathematics. This is done to provide a visual display of academic growth and areas that need to be improved in by students, grade levels, and teachers. Secondly, they have the respect of the administration, faculty, students, and parents. All participants have been chosen for teacher of the year; they serve on the school leadership committee, are mentor teachers, and grade level chairpersons. These positions require numerous hours of extra work and are entrusted to those people who are willingly to work above their classroom requirements. There is always a request list by the school for students to be placed in these teachers' classrooms. Each year during early registration, the school provides an application for parents to requests their next year's classroom teacher. The principal adheres to those requests based on classroom availability and demographics as much as possible. The participants all have at least a master's degree, and consistently participate in professional development and school leadership initiatives. Finally, these teachers have received excellent evaluations from the administration. Each teacher was asked to share their evaluations from the past two years of their G.T.O.I. (Georgia Teacher Observation Instrument). These teachers were selected using purposeful sampling. The

elementary school only has 20 full time classroom teachers, which meant that the sample was small. The participants in this study were given pseudonyms to protect their identities. Due to the restraints of working full time, the researcher chose the research site due to convenience and accessibility to the participants.

Background

The backgrounds of the teachers in this study were quite diverse. Teacher BH2 is an eight-year veteran. She has a Master's degree and is currently pursuing a Doctorate in Elementary Education. She has taught both second and third grades at the current research location. She initially pursued a college degree in Nursing, but always volunteered to help with at-risk children. After completing her basic science requirements she changed her major to Education. She is currently the grade level chairperson, a past Teacher of the Year, Curriculum Advisory School Representative, and a member of the school's Leadership Design Team.

Teacher BH3 is a ten-year veteran teacher. She recently completed her Master's degree in Early Childhood Education. She has only taught third grade, but she has experience teaching at several elementary schools. On completing her Bachelor's and Master's degrees in Business Administration, she indicated that she was tired of the business world after ten years and wanted a change. She returned to college and completed her teacher certification requirements. She claimed that she became a teacher because of her experiences with her kindergarten teacher. "She was a wonderful teacher and I wanted to make children feel the way I felt that year. I don't remember what she taught me, but I do remember that we always felt special." Teacher BH3 stated, "Teaching is also more fulfilling and conducive to me being a single parent." Teacher BH3 is the Grade Level Chairperson and a member of the school's Leadership Design Team.

Teacher BH4 is a seven-year veteran teacher. She has a Master's degree and is currently pursuing a specialist degree in Elementary Education. She has taught second, third, and fourth grades at the research site. She majored in Biology as an undergraduate student, but did not know what she wanted to do with her degree. She had an opportunity to work with a group of Choctaw children who were from an impoverished area. She stated that this experience changed her life and she knew that she wanted to pursue a career working with at-risk children. Currently, Teacher BH4 serves as the Grade Level Chair and a member of the Leadership Design Team. She is also the chairperson of several school projects such as Pennies for Patients, Help the Hooch, and the Ronald McDonald Charity.

Classroom Demographics

The classroom demographics of the three case study participants were as follows. Teacher BH2 (Second) had 15 students, 9 male and 6 female. All students were African American and qualified for free or reduced-price lunch. Teacher BH3 (Third) had 15 students, 6 male and 8 female students. The classroom consisted of 1 Caucasian student, 12 African-American students and 2 of mixed race. All students also qualified for free lunch. Finally, Teacher BH4 (Fourth) had 22 students, 10 female and 12 male. The class consisted of 19 African Americans, 2 Caucasians, and 1 Hispanic student. The students were all eligible for free lunch.

Data Collection

The defining element of qualitative data collection is the researcher as the key instrument (Lincoln & Guba, 1985). Although all research is determined by choices made by the researcher at all stages of a study regarding methods, interpretation, and communication, those researchers who use qualitative methods emphasize that the researcher is the main instrument of data

collection. Therefore, the primary question with regards to qualitative methods is whether someone else interpreting the same data would arrive at similar conclusions.

Data for this study were composed of two in-depth, semi-structured interviews. The first interview was conducted to gain background information on each teacher and their classroom. After these interviews were conducted, an observation schedule was planned in which I observed various portions of math lessons. The second interview was conducted to discuss what was observed during lessons, and to provide the teacher the opportunity to add any additional, as well as to confirm information that was given.

Interviews

During the first 9 weeks of the school year, I was able to conduct initial interviews with the educators who agreed to participate in this study. I waited until these educators had completed the first four weeks of school to get acquainted with their students before interviews were completed. An audiotape was used and field notes were taken during the interviews. Interviews were conducted after school in the teacher's classrooms. This setting allowed for the researcher to review lesson plans, analyze work samples, and gain background knowledge about students and those being interviewed.

Qualitative researchers often refer to interviews as guided conversations (Rubin & Rubin, 2005; Yin, 2003). More specifically, there were guided questions for the interviews, but the primary goal was to initiate and facilitate conversations rather than to restrict discussion. The goal of the interview was to give each participant the opportunity to share their story of why they became teachers. More specifically, interviews served to: (a) get further acquainted and deepen my relationship with the participants; (b) initiate a conversation about effective math teaching strategies for at-risk children; and (c) learn about the participant's educational beliefs and

practices. I also asked these participants to bring in any data that supported their philosophies of teaching. The two main research questions for this research are:

1. What characteristics do effective educators who teach children from poverty possess?

2. What strategies do effective educators implement that affect the learning of children from poverty?

Classroom Observations

The guided mathematics lessons were conducted in various parts. On Monday, initial mathematical concepts are introduced to students and time is allowed for guided practice and instruction on assigned activities for the week. I conducted initial 30-minute observations on Mondays in order to gain background on the lessons that would occur during the week. On Wednesdays and Thursdays students were independently completing tasks and working in groups toward understanding concepts. I returned for an additional 60 minutes on Wednesday and/or Thursday to observe the instruction of the educators being observed and how students conducted themselves with understanding instructional tasks.

Observations lasted for one hour. A videotape was used to record the lesson and field notes were taken during the observations to ensure that information was accurate and thorough. During these observations, I looked for incidents of teaching strategies that were used to teach at-risk students during classroom instruction. Those strategies could be anything ranging from how these teachers relate to their students to special teaching instructional practices. Through this process, themes and concepts emerged that I could analyze. The use of interviews and observations allowed me to gain a clearer understanding of how these educators conceptualized their own effectiveness and defined teaching effectiveness in high poverty elementary schools with at-risk children.

Post-Observation Interviews

Post-observation interviews were held after school in teachers' classrooms on Fridays. Again, this allowed for me to observe student work from classroom sessions and discuss with each teacher what had transpired during the observation. The second and final interview was held to discuss my observations in each teacher's classroom. This session gave the interviewee the opportunity to make clarifications to any statements or observations of what I observed. This process also allowed me to fact check previous information received from each educator. The second interview also gave the educator an opportunity to add information that may have been missed in the previous interview. My goal for this research was to analyze what effective educators actually do in their classrooms when working with at-risk students from poverty. Whether the answer lies in the actual instruction, the building of relationships or both is vital to assess what enables at-risk children to be successful.

Data Analysis

Data analysis occurs throughout the research process and allows researchers to condense a large amount of information into a simpler format (Merriam,1998; Marshall & Rossman, 1999). Analysis involves organizing data, breaking them into more manageable parts, developing codes, and searching for possible patterns (Bogdan & Biklen, 2007). My initial guiding research questions will provide guidelines for data analysis. Yin (2003) recommends two techniques when analyzing studies involving multiple cases. The first, pattern matching, involves comparing an empirical pattern with a predicted one, which will be supported by literature. If those patterns match, it helps to strengthen the internal validity of the cases. A second technique applicable to this research is cross-case synthesis, in which each case is treated as a separate study, yet is compared for similarities and new emerging themes. As suggested by

Bogdan and Biklen (2007), I looked for patterns and themes to emerge from interviews and field notes, and used words and phrases to develop coding categories.

For this study, I used open coding to analyze the data in detail (Strauss & Corbin, 1998). The data were broken into manageable parts and studied in detail to identified similarities and differences. I allowed room for the codes from the data to emerge on their own. Each interview was coded by hand using abbreviations. This led to creating subcategories for initial categories that were too broad. After hand coding, the codes were transferred to an electronic database to file and maintain the documents (ATLAS.ti). As an additional step, all conversation segments from each interview with the same themes were grouped together for quick retrieval when it was time to discuss the findings.

Based on careful analysis of the data and critical interpretation of the results, I was able to draw several conclusions that appear to represent what the participants shared during interviews and from field notes taken during observations. First, since I was closely connected to the study from the outset, I was careful to examine the data objectively by behaving as though I was an outsider (Dewalt & Dewalt, 2002). This allowed me to interpret the findings as raw data, the way a non-biased observer may do. Secondly, I analyzed the data using the lens of someone who was similar to the participants. This second analysis allowed me to use my background as an educator to attempt to empathize with the participants in order to discern deeper meanings in the experiences they shared (Miner-Romanoff, 2010). The findings of this qualitative study are presented in a narrative format in order to provide a thorough and detailed description of the findings. My goal was to make certain the participants' thoughts, emotions, and behaviors were clearly evident in the writing, in order that readers are clear about the meaning of what the participants expressed in their interviews.

Coding

      Codes are tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study (Miles & Huberman, 1994). Codes are typically attached to large quantities of information. Codes are vital to unify data. Codes provide cohesion among sets of data, therefore allowing the researcher to analyze what has been found. Analysis of the data began by coding each interview and observation for this research. One method of creating codes is to create start codes from the conceptual framework of the study and the research questions being addressed (Miles & Huberman, 1994). I was able to discover patterns related to my research questions. I created an original set of codes using words and phrases to denote the topics that supported my research. My initial codes were "differentiated instruction," "questioning techniques," "engagement strategies," "community of learners," and "building relationships." Next, larger sets of data were reduced to smaller analytical units (Miles & Huberman, 1994). Sub-codes were developed in order to reduce the major or initial codes. These codes were then assigned to data in a systematic fashion (Strauss & Corbin, 1990).

      Additionally, my analysis focused on grounded theory. Grounded theory is a theory developed inductively from data (Strauss & Corbin, 1998). As the data were analyzed, I was able to determine interconnected categories. Three types of coding are utilized by grounded theory: open coding, axial coding, and selective coding (Strauss & Corbin, 1998). Open coding denotes the portion of the data analysis in which labels and categories are given to the particular situation being observed. Data are then broken down by asking questions such as what, how, when, etc., and then compared and grouped according to similarities (Miles & Huberman, 1994). Open coding is a system of creating codes by analyzing what has been discovered rather than using predetermined codes. Due to the data not being placed into pre-existing codes, the researcher is challenged to allow the codes to develop more progressively (Miles & Huberman,

1994). Axial coding is the next step, in which codes are related to each other through a process

of deductive and inductive thinking by the researcher (Strauss & Corbin, 1998). Finally, themes

and trends were identified by locating the prevalent codes in the data (Miles & Huberman, 1994).

The process of choosing one category and then relating all other categories to it is called

selective coding (Strauss & Corbin, 1998).

Table 1: Initial Coding Categories	
Coding Categories	
Differentiated Instruction	The structure of lessons that address the diversity of learners in a classroom.
Questioning Techniques	The types of questions that garner more than yes or no responses. These questions seek to understand the thinking of the student.
Engagement Strategies	The techniques and activities that motivate students in the learning process.
Community of Learners	Strategies that allow students to work together in groups to increase their understanding of academic content and builds their social skills.
Relationship Building	How educators build positive connections with students that insures their academic and social success.

Memoing

Lempert (2007) sees memos as "uniquely complex research tools" and memoing as a

methodological practice by which the researcher explores processes, organizes and interprets

data, codes, categories, and theories, and discovers new directions for theoretical sampling (p.

246). Memos also provide the site for working through the abductive process, creating diagrams,

or using prior knowledge in the literature. The intent of memo writing is not description but

theory development, and "continuous memo writing, re-reading and re-writing, leads to

progressively more abstract levels of theorizing" (p. 262). Memoing for this research study

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started with field notes during interviewing, transcribing, and analyzing the data. I used Atlas.ti, but I consider the analysis to have happened through memoing because it allowed me to capture a record of my thinking as I mentally processed data, constructed answers to the research questions, and developed the grounded theory. True to grounded theory tradition, I used memos to compare ideas, data, codes, incidents, and it was through memoing that the concepts and themes emerged.

Integrating

Lempert (2007) calls integration "the most difficult feature" in grounded theory research (p. 258) because of the demand to keep categories analytical, bring together only the best quotes from mountains of data, clarify and distill months of memoing, and discuss the emergent grounded theory in light of the published literature in a clear, accessible, useful narrative (Charmaz, 2001; Stern, 2007). This research includes frequent participant quotes to illustrate the categories and the grounded theory. Charmaz (2001) clarifies that relationships during data collection and participants take precedence; during analysis and presentation of the data, the emerging grounded theory takes precedence" (p. 691).

Categorizing

Categorizing began with an initial approach of grouping codes as descriptions of themes that would be found in the research. Categorizing became concurrent with coding and memoing. Some of my categorization process was inductive, as I built from theories to codes to successively more a concrete categories. At other times my process was deductive, as I recognized useful ways to deploy concepts from other studies and theories. Kelle (2007) suggests that this is an appropriate time to bring in the sensitizing concepts from the literature as long as

they serve as heuristic devices to generate questions for understanding. Dey (2007) points out that these questions can serve to send the researcher back to guided theoretical sampling, but they also work to lead the researcher to articulate relationships between core concepts: "When we categorize, we typically invoke theories of how the world works and, in this sense, our categories provide implicit guidelines for inference and prediction" (p. 178).

Epistemological Stance

In conducting this research, my epistemological stance is that of a constructivist. Data in qualitative research is created through the social processes of researchers interacting with the participants in their studies. Research using qualitative methods is closely associated to diverse visions of how social reality should be studied, and what can be regarded as acceptable knowledge (Bryman, 2004). In the construction of knowledge, social scientists have view the face-to-face encounter as the optimal way to actively engage with research participants in qualitative research (Seymour, 2001). According to Crotty (1998), knowledge is constructed, not discovered, and people construct knowledge in diverse ways.

As an educator, I know and understand the curriculum that must be taught to students at various grade levels, yet the manner in which that curriculum is delivered varies among classrooms and instructors. The classrooms in which observations were conducted utilized the constructivist model. Even though the curriculum was mandated, each educator built learning opportunities for individual students. In my observations, I was made aware of how students construct knowledge through thinking routines, math maps, and activating prior knowledge activities.

Reliability and Validity

In qualitative research the report is considered valid when the findings are a close reflection of what the participants have described to the researcher (Marshall & Rossman, 1999; Lincoln & Guba, 1985). When researcher and participant biases are not monitored appropriately, they can cause a threat to trustworthiness. Lincoln and Guba (1985) suggested five strategies to manage these threats: connect the study to the theoretical framework (credibility); transfer results to other contexts without generalizing (transferability); make sure the data and the findings are consistent (dependability); attempt to have as little bias as possible (confirmability); and have the researcher acknowledge his/her active participation in the study (reflexitivity).

My strategy to guarantee the trustworthiness of this study involved several factors. First, I triangulated the data by interviewing participants, using an inquiry protocol, and conducting observations while taking detailed field notes and engaging in constant comparison of the information to be certain that it was parallel. "Triangulation is defined as a validity procedure whereby researchers search for convergence among multiple and different sources of information to form themes or categories in a study" (Creswell & Miller, 2000, p. 126). Secondly, I employed member checking (Yin, 2003) to confirm the accuracy of the codes I developed for the themes that emerged during data collection. Lastly, I conferred with the participants to ensure that I had portrayed them factually, so that my personal biases would not influence the data that I collected. I restated questions from the individual interviews and reviewed the responses they shared, inquired if I had interpreted their statements correctly, and asked if they wanted to share any additional information. This allowed an opportunity for the participants to reflect on their prior statements and provide clarity for me if they believed they had not been properly understood.

Guba and Lincoln (1981) coined the parallel concept of trustworthiness to address the issues of reliability and validity of qualitative research. Trustworthiness is comprised of four aspects: credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1981). Trustworthiness of data is tied directly to the researcher who collects and analyzes the data. Methods for ensuring credibility, transferability, dependability, and confirmability were considered throughout the design, implementation, and analysis of this study. As discussed above, one way the credibility of this study was established was by the use of triangulation.

How reliable and valid a research study is determines how much it can be "trusted." Both validity and reliability are defined differently in qualitative research than they are in studies that adopt a more traditional quantitative approach. Reliability in quantitative research typically evaluates whether two different researchers would get the same results from a study, whereas qualitative researchers are more concerned with "the accuracy and comprehensiveness of the data" (Bogdan & Biklen, 1998, p. 36). Quantitative researchers measure the reliability of their results according to the extent that a replica study would yield similar results, but as Merriam (1998) pointed out, reliability, in this sense, is impossible in a qualitative study. Any researcher who chooses to recognize the value of her own subjectivity and the role that her subjectivity plays in the entire research process understands that no qualitative study could be replicated with the same results. Furthermore, it is unlikely that any two qualitative studies would have the same design given that the researcher's subjectivity comes into play the very moment planning of a study begins. Transferability refers to the generalizability of the results of the study. In other words, can the conclusions of this study be transferred to other contexts? One way to ensure transferability is by providing a thick description of the findings for the readers to assess the potential transferability appropriate to their own settings (Miles & Huberman, 1994).

Summary

Educators must understand what children of poverty face and what qualities are needed on the part of teachers for them to be successful in and out of school. Effective educators realize that they cannot create change alone, nor will alternatives to solving problems come from bureaucrats. Change will only come through basic common sense principles about treating at-risk children with respect and teaching these children how to interact with the world. Effective educators must challenge the paradigms of all those who interact with at-risk children from poverty on a daily basis. With the increased pressure on educators and the educational system to advance, improvements must be achieved immediately. The techniques and strategies that are utilized by educators who show the most promise with these students must be implemented at all educational levels to create the desired change that is necessary in the lives of these children. Therefore, these children can grow up and become productive members of their communities and contribute positively to society.

Chapter 4: Findings

My purpose in conducting this study was to examine the characteristics and strategies of effective educators who work with children from poverty. The review of literature centers on characteristic of effective educators of children from poverty and the strategies that they employ in their classrooms. There is extensive research on effective teaching and educator characteristics concerning children from poverty and how high poverty schools that should be deemed failures continually improve and are successful. This research attempts to examine the characteristics of educators and their practices (Reeves, 2003). With an investigative outline, I utilized a grounded theory design with three educators, one each at the third, fourth, and fifth grade levels, to examine:

1. What characteristics do effective educators who teach children from poverty possess?

2. What strategies do effective educators implement that affect the learning of children from poverty?

The information presented in this chapter will explore how effective educators use diverse strategies in mathematics instruction and their personal characteristics that enable their students, from poverty, to be successful academically. Across investigative categories, several examples were apparent in the data and consistent with previous research. However, a few unanticipated patterns emerged. Excerpts from classroom observations and interviews will be used to illustrate the findings.

Qualitative studies are designed to explore a concept or event and to build a theory about it (Miles & Huberman, 1994). The data collected must be condensed, clustered, and sorted into a

framework that ultimately describes the themes and relationships that emerge. I began this process by coding data. Based on previous research done by Wolf et al. (1996), I was able to confirm themes found to be common in researching effective teaching strategies and educator characteristics. I was also able to confirm emergent themes based on the classrooms from which I gathered data.

The study was conducted in an elementary school in an urban school district in the southeastern part of the United States. The school has approximately 412 students in grades Pre-K through five, 100% of who are from poor homes. The data sections used in this study were taken verbatim from the effective teacher's transcriptions of classroom observations or interviews. Words in quotation marks indicate direct speech by educators or students. Words in brackets are the researcher's and indicate questions by the researcher, serve as reference information, or to add clarification. Each quotation is marked by the educator's code name (ex: BH3).

The code book, provided in Appendix A, summarizes all categories and provides definitions for them. In the following sections, I provided descriptive examples from the data as evidence that themes were evident.

Personal Teaching Philosophies

All teachers indicated what their teaching philosophies were and provided metaphors for their diverse teaching styles in working with at-risk children from poverty. Teacher BH2 stated that her philosophy could be stated in one word, "elasticity." She expressed that, in working with her students, she realized that the best laid plans do not always work: one must be willing to change and make modifications to one's personality, belief systems, learning styles, and views. These children are quite different from the way that she grew up and was taught. The ability to

adapt and change makes the day easier and learning more fun. The advice that she gave to anyone who does not work in education is to observe and volunteer before making generalization and comments about what is best for the education of American children.

Teacher BH3 expressed her philosophy in a light-hearted and fun way using the common saying, "Rome wasn't built in a day!" She believes that the children she works with are quite capable of learning and they should be held to high standards, but academic proficiency will not happen overnight. Many of the children that she teaches come to school with severe emotional, social, and academic deficiencies. There are many instances in which she sees the need to attend to the personal concerns of the child as a person before she can begin to teach academic standards. She advises those who want to go into education that it is the hardest work that they will ever do, but also the most rewarding. When she sees the students who are struggling finally understanding the material that has been taught, it reassures her that her hard work is worth the long hours.

Teacher BH4's philosophy is based on building strong relationships with her students. She lovingly jokes that with them that at school, "I'm your mama and you may not like what I do or agree with it, but I know what is best for you, so do it!" She indicated that many people do not realize what working with at-risk students from poverty entails. When one wants to achieve true success when working with a child, one must work with the entire family. One must temper one's words with kindness and understanding. Teachers must forgo technical language when speaking with parents of at-risk students in order to get them on their side. They must realize that it is not a situation of opposition between teacher and parent, but that all must work together to help children to be successful.

Coding Categories

There were several categories that establish the basis for effective educator strategies that I wanted to observe in each classroom. In each classroom the methods and deliveries by teachers were diverse. Students were engaged in a variety of activities to increase their abilities and understanding. The following sections provide for a description of those activities and examples of authentic classroom conversations between students and teachers.

Differentiated Instruction

In math practices, differentiated instruction allows for all students to be taught in diverse and engaging ways in which to learn, apply and ultimately understand the curriculum. Tomlinson (2000), a noted expert on differentiation, points out that research has proven that students are more successful when they are taught according to their own readiness levels, interests, and learning profiles. Differentiation can occur not only through creating several sets of lesson plans, but giving students a choice of how they demonstrate their knowledge from the educator's instruction. Differentiation can occur in a guided math classroom through graphic representations, language, and literature. Children of poverty need the opportunity to demonstrate knowledge in a variety of ways. Students of poverty need enriched learning opportunities with explicit instruction to build towards their individual needs for academic success. Differentiation is demonstrated in students being given the choice through learning math through graphic representations, literature, and reading.

In the three classrooms where math differentiation was observed the methods were different, but the strategies utilized all were intended to reach students according to their interests and ability levels. In the second grade classroom children participated in an activity called Kangaroo Jump. The lesson and activity were utilized to assist students in understanding estimation.

Students were given various instruments such as yard sticks and rulers. The students took various jumps, marked their jumps, estimated the lengths, and then actually measured the jumps for accuracy. In the third grade classrooms the students were actually using manipulatives to understand basic division and the concept of what to do with remainders. The activity extended to problem solving activities. Students were posed with questions about what to do with the remainders in real life situations. For example, one question dealt with students riding on a bus for a field trip. If there were students remaining that did not fit on the bus evenly, what would those students do? In fourth grade, students were using fraction tile manipulatives. The focus of the lesson was showing equivalency amounts with fractions and with money.

Differentiation was further shown through a process called word splash. Word splash is a process that not only teaches students definitions of math terms, but it allows them the opportunity to show that math has a unique language and utilize how this language is used. The students are allowed to complete math activities with the definitions to make the easier to learn. These activities include songs, acrostic poems, and chants. The math as reading allows for students who are strong in reading, but weak in math to utilize their reading ability to assist in learning math. Teachers various literature books that taught math is fun and realistic ways.

Mathematics as graphic representations: Educators use games, visuals, manipulatives, and models to instruct students on math concepts.

Second Grade: Measurement
BH2: "We are going to use estimation when measuring and play a game today called 'Kangaroo Jump.' Why is estimation sometimes good when measuring?"
S1: "Sometimes it is faster."

BH2: "Yes!"

S2: "You don't have a ruler."

BH2: "Is it good to always know the exact size of something?"

S1: "No, because sometimes guessing is better."

BH2: "Why?"

S3: "You may be playing a game like at a carnival and you don't have time to count or measure, you just have to guess."

BH2: "OK that's another form of estimation. I did not think about that. I will try that with the class to see how good you are at estimation when counting things."

S3: "Let's play the game."
[Teacher explains the instructions to the game. Students will stand in lines in groups of two. They will jump as far as they can and the other student will use tape to mark their jump. The two students will estimate the length of the jump in inches. Then measure the jump for a precise measurement. During the previous week, students had been using rulers and measuring tape to understand inches, yards, and feet.]

Third Grade: Division
BH3: "We have been working with dividing whole numbers with no remainders. Today I want to focus on dividing numbers that have a remainder. Who knows what types of numbers are divided and have remainders left?"

S1: "Odd numbers."

BH3: "Why?"

S2: "They can't be divided easily because one is always left over."

BH3: "Is there only one left over or more?"

S1: "No."
BH3: "What makes you say that?"

S3: "Sometime it depends on the number you are dividing by."

S4: "Yeah, if you have a lot of people the less they get and less you could have left."

S5: "The fewer people you have the more they get. Then you could also have a little left."

BH3: "Those are both great observations. Let's try a few odd numbers and different amounts to divide by to test those theories. I want you to count out twenty five manipulatives on your desk and divide them into sets of two."

S3: "You have one left over."

BH4: "Now, I want you to count out twenty-five manipulative and count them out in groups of three."

S2: "You still have one left over."

BH4: "I want you to count out twenty-five manipulative and count them out in groups of four."

S3: "You still have one left over."

S5: "I get it. The remainder has to do with the number you are dividing by, not the number of things you got."

Fourth Grade: Fractions
BH4: "Hey guys, we are going to work with fraction tiles today and work on creating equivalent fractions. Let's do some together and then I will let you guys explore some on your own. Look for the fraction tiles that are marked ¼ and see which ones you can find that are equivalent."

S1: "The 1 whole tile is equivalent."

BH4: "That correct! What else can you tell me about that?"

S1: "It's just like 4 quarters is a whole dollar."

BH4: "Exactly! Anyone else?"

S2: "You can use the two half tiles."

S3: "The $\frac{1}{10}$ can be dimes. Ten dimes equals a dollar."

BH4: "Good job, these are all ways to represent a whole or equivalent fractions. We are going to further our understanding by using tiles to add and subtract fractions with unlike denominators later."

S1: "You can also make a whole with $\frac{1}{3}$. How much money is that?"

BH4: "Can anyone tell me how much money is $\frac{1}{3}$ of a dollar?"

S1: "Thirty cents."

BH4: "What made you say that?"

S1: "I just guessed because it has a 3 at the bottom of the fraction."

BH4: "That was a good guess. It is actually thirty-three cents."

Math as language: Math has language and terminology that is quite often idiosyncratic.

In order to understand that language, work must be done not only to memorize definitions

but to apply and understand the language.

Second Grade: Measurement
[The word splash work in second grade consisted of the following terms: foot, yard, inches, estimate.]

BH2: "Let's look at our word splash for today. We added a new word. That word is 'estimate.' What do you think that means?"

S1: "To guess."

S2: "It is like guessing, but not too much or too little."

BH2: "Why do you think you can't guess too much or too little?"

S1: "You have to think about your guess before you make it."

S3: "So your guess will make sense."

BH2: "When would a guess or an estimate not make sense?"

S1: "When you estimate a little and you know it's a lot."

BH2: "Who likes football?"
[Everyone says, "Yes"!]

BH2: "Football fields are measured in yards. So would it make sense to estimate the length of your pencil in yards?"

S2: "No, that estimate would need inches."

Third Grade: Division
[The word splash work in third grade consisted of the following terms: dividend, divisor, quotient, remainder, divisible.]

BH3: "We are working with remainders today. What are remainders?"

S1: "It is the part that is left over."

BH3: "Why would you have some leftover?"

S2: "Some numbers are odd and can't be divided evenly."

BH3: "What about the number that you are dividing by."

S1: "The number you divide by is important."

BH3: "Why is that number important?"

S3: "That number may make the remainder change."

S2: "It can stay the same it all just depends on the number."

Fourth Grade: Fractions

[The word splash work in fourth grade consisted of the following terms: numerator, denominator, equivalent, mixed number, improper fraction, and reciprocal.]
BH4: "The word of the day is 'equivalent.'"
S1: "That just means equal."
BH4: "Can it mean something else?"
S2: "Yeah, the same amounts."
S1: "Like if you have equal money as a fraction it means the same thing, but different ways."
BH4: "What do you mean by 'the same, but different ways'?"
S1: "Like the anchor chart says, ¼ is the same or equal to 25 cents. That's equal."

***Math as reading*:** Educators can teach math concepts utilizing children's literature that

allows students to make practical application to real world situations.

Second Grade: Length **by Henry Pluckrose**
BH2: "Why do we use instruments like rulers to measure things?"
S1: "Everything can be measured with rulers."
S2: "Not a building."
S2: "You want to know the right size of things."
S1: "You have to guess how big it is."
BH2: "Does anyone know what that is called?"
S3: "Guessing"
BH2: "Not quite, try again. It begins with an e".

S2: "Estimate" [Several other students repeat and agree in unison].
S4: "Sometimes estimating is better."
BH2: "Why?"
S4: "You don't have no ruler."

Third Grade: Divide & Ride by Stuart J. Murphy
BH3: "Why do you think division is important?"
S1: "Sometimes you don't have enough things."
BH3: "What made you say that?"
S1: "I had some candy and I didn't have enough for everyone so it wasn't even."
BH3: "What did you do?"
S1: "I gave each person a piece until I had an extra."
BH3: "Then what happened?"
S1: "I ate the extra piece."
BH3: "Do you know what the extra piece is called?"
S2: "The leftover."
S3: "No, the remainder!"

Fourth Grade: The Hershey's Milk Chocolate Bar Fractions Book by Jerry Pallotta
BH4: "Today we are going to discuss through literature how to recognize and to apply fractional parts to the decimals."
S1: "This is going to be easy!"
BH4: "Are you sure? Why do you say that?"
S1: "If you have decimals that's money. Looking at the pictures it shows that ¼ of the Hershey bar is like ¼ of a dollar. That's a quarter. Just follow the pattern."
BH4: "What pattern do you see?"
S2: "Two quarters is half of the Hershey bar that's 50 cents. Three quarters of the Hershey bar is like three quarters; that's 75 cents. A whole Hershey bar is like a dollar. You are just adding on."
S1: O.k.
BH4: "Do you think you can apply the same meaning with tenths of the Hershey bar?"
S3: "Maybe."
S4: "It has to be a pattern too!"
BH4: "Let me get you started, one out of ten parts is like ten cents."
S2: "Then two out of ten parts is twenty cents."
B4: "So, can we all complete the pattern together?"
[Students in union complete the pattern.]

Table 2: Pre and Post Test Math Assessment & Student Growth (Guided Math)	Pre-Test Class Average	Post-Test Class Average	Percentage Growth
Second Grade Measurement	41%	83%	42%
Third Grade Multiplication	37%	89%	52%
Fourth Grade Fractions	43%	77%	34%

The above chart demonstrates the grade levels pre and post S.L.O. (Student Learning

Objective) results. The teachers reported the students' academic growth before teaching the unit

and after teaching the unit. Teachers attribute the activities and their teaching methods to their

student's performance at each grade level.

Questioning

There are several thinking routines or questioning strategies that have greatly improved

the academic achievement of children in poverty. Due to their lack of exposure in many areas,

thinking routines can open up a new world to these children and fill in the gaps. The first

thinking routine is "See-think-wonder." The thinking routine allows for students to observe

something and from that observation educators are given a series of questions to pose to students

to guide their thinking. As Ritchart, Church, and Morrison (2011) put it, "The seeing allows for

opportunity to observe before speaking. Then wonder allows for a student to synthesize

information and identify additional thoughts" (p.55). Due to the new testing standards, students must explain their thinking and these routines have greatly helped students from poverty to give written and verbal responses that are more inquisitive and mature.

The second thinking routine utilized in the school is, "I used to think…, now I think." This routine allows for the evolution of thinking for children from poverty. "I used to think" allows for the student to state what misunderstanding they had on the material, whether it be complex or simplistic. The students enjoy it because as a unit of learning progresses they see the enormous amount of information they have learned and how they have grown. "Now I think" is a time in which students can actually be bold about their new learning. Educators have indicated that the children now correct their parents about common math misconceptions. By examining and explaining how and why the thinking of students has changed, students develop their reasoning abilities and recognize cause and effect relationships (Ritchart, Church, & Morrison, 2011).

The 'What makes you say that?' routine helps students identify the basis for their thinking by asking them to elaborate on what lies behind their responses (Ritchart, Church, & Morrison, 2011). Educators of children from poverty like this strategy and see its power because it releases the educators from being the holder of all information in the eyes of the student. Even though the backgrounds of the students and teacher may be vastly different, what these children have to contribute is considered valuable. The students realize that they have different life experiences that may contribute to their understanding and interpretation. The educator provides guidance to these students in finding and understanding the answers for themselves.

In the classrooms were observations conducted, there were examples of students using interactive journals for math. These journals were not just a place for working algorithms, but

students actually had to explain their thinking to questions that were asked. Students worked in

small groups of usually four or five. In these work groups students had to justify their responses

to their math problems in their journals. They are not allowed to only record their answers. They

had to write sentence about how they arrived at their answers. If their answers were incorrect,

they had to further explain how their thinking changed. Since this was the first part of the year,

teachers modeled their expectations several times throughout the week. This process was used to

assist students in preparing for the new Common Core Curriculum. The new standards are more

focused on teaching students how to think using conceptualized methods as opposed to strictly

procedural learning.

> Researcher: "What effects have questioning strategies and thinking routines had in your classroom?"
> BH2: "Second graders are naturally curious. So the questioning strategies and thinking routines help me to understand their thinking, but it also helps to bring in new questions and observations in any subject matter."
> Researcher: "How so?"
> BH2: "In math, they must observe things three, four times. Their initial response allows them to express what is going on, especially in experiments. Finally, their wondering about the next steps are molded from listening to what others have to say and teacher guidance."
> BH3: "Math concepts for children from poverty are extremely difficult to remember or understand. I found that the strategy, 'I used to think …, now I think' has helped to improve my math scores. Typically, children were confused, but I see an enormous improvement in understanding."
> Researcher: "Can you explain the strategy, 'I used to think…, now I think'?"
> BH3: "Basically, it involves the evolution of thinking. Students need to see how much they have learned, just as adults do. It is their self-assessment to show growth of their knowledge."
> BH4: "The thinking routines established in my classroom have helped me as much or even more than the children. By introducing "What makes you say that?" students know that they can't just give me one or two word answers. I'm going to delve more into what they meant. I am also not just looking for the right answer, but their reasoning behind their thinking. Students need to understand and elaborate and justify what they are sharing with the class."
> Researcher: "Are they reluctant to share?"

BH4: "At first they were, but I did a lot of modeling with them. When the fear factor is gone and they know that we are all family and here to learn, they open up."

Engagement

Successful teachers of children from poverty are persistent and stubborn in their belief that their students have the potential to learn. They consistently try to generate and maintain student engagement and to organize the learning environment to ensure that learning occurs (Holt & Garcia, 2005). Engagement is important to getting children to come to school. If they are interested, they will show up and give you their all each day. Glasser's theories of motivation focus on this concept. Educators must give students activities that appeal to what interests them. The standards cannot be changed, but the manner in which the curriculum is presented can be.

Many children in poverty seem to rely heavily upon their kinesthetic abilities to learn (Payne, 2005). The more the curriculum is allowed to be learned in a kinesthetic manner, the greater will be the increase in the amount of information that will be retained by children from poverty. Therefore, these students will grow academically and be able to compete in society with their peers from various socioeconomic strata.

In the classrooms where observations occurred there was a big focus on engaging the students through various methods. As the commentary states from interview students participated in games, interest inventories were used to incorporate their favorite things into the classroom settings. In the second grade class, students were grouped by their favorite football teams for boys. As they learned the algorithms of their multiplication tables they were allowed to move their footballs of their favorite teams to the goal line. The girls were allowed to use their favorite singers to motivate them to learn their multiplication facts. As they passed their weekly tests they were given award statues. This small action kept the students motivated to learn and reach their

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goals. In the third grade class, students were engaged in math by using music, art, and current events. One activity that was done was current event math. Students were allowed to choose any event from a video, the news, or a magazine, and find all the facts about math that they could. For example, if students chose a video of their favorite rapper, they would have to research facts about that person. Then using those facts they were assigned math assignments. One center activity was find the entertainer's date of birth. The person's date of birth, (11/25/1993), could be changed to standard form, expanded form, and word form. This assisted students in place value. Another standard dealt with conversion of customary units. Students would find the height (feet and inches) and weight (pound and ounces) of people and convert them in various ways. The same concepts were done in a center activity for yards thrown or run per game for their favorite player. Students had to convert yards, feet, and inches to various assigned lengths. This provided a fun way to learn the standard because they were dealing with people they knew and admired.

Another activity in fourth grade that kept students engaged was the use of common popular music to teach math concepts. Teachers changed the lyrics to songs to assist students in remembering how to perform certain mathematical steps. For example, Beyonce's song "To the Left" was used to teach students how to move decimals when multiplying. In the third and fourth grade classes the students used IPads for learning. The students who were having the most difficulty and were known for their dislike of math were allowed to use the technology for assistance in learning of concepts. There were games and activities loaded that met the standards. Students were assigned to play and their progress was monitored to show areas of growth and weakness. The teachers would adjust their learning goals on a weekly basis according to each student's progress.

Researcher: "What strategies do you use to engage your students?"

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BH2: "Many teachers think that engaging children means entertaining them, so they hate the word. I feel that it just means finding what they are interested in and doing it. We are in the SEC [Southeastern Conference], so football is king! So many of the math activities I do with my boys, especially in math, deal with football in some form or another. The girls typically like music; Justin Bieber."

Researcher: "Can you give me some examples?"

BH2: "Yes. This year we are teaching multiplication tables to second graders, which is usually not taught until third grade. Math facts are played to music, it helps them to remember. I also divide the students up into their favorite football teams. When they get answers correct, they can move their footballs. It is very simple, but they are learning, and I am tying it to music and sports, which they love, so it works. Almost all my students know up to their five facts. I think that is pretty good for the first few months of school."

Researcher: "Do you think they can apply them?"
BH2: "Probably not, but I feel good that they know them, understanding can be developed as the year progresses."
BH3: "The best way to engage children at this age is music and art. When they can move and draw there is nothing they can't learn."
Researcher: "Can you give me some examples?"
BH3: "Yes, I work with the art teacher for science and social studies art posters from time periods in history that are relevant to give the children some point of reference. Once of the people they must know is FDR, so we found some very powerful pictures of the Great Depression and some of Roosevelt's New Deal programs being implemented. They were able to not only talk about what they saw, but draw how the pictures made them feel."
Researcher: "What about music?"
BH3: "There are thousands of raps out there on science and math topics. I realized a while ago that the children we teach love rap and hip hop. If you put a hip hop beat to the material, it is in their bodies as well as their brain."
BH4: "As a fourth grade teacher, I find that you have to be engaging as well as innovative."
Researcher: "How so?"
BH4: "They are so into video games and electronic devices. I find myself not only trying to tune in myself to keep abreast of what is going on, but tying to incorporate those ideas into my class. I love the "Just Dance" video game. I can put questions and activities to the steps and the children remember and understand more. Playing games on our class set of iPads and laptops are also helpful. As long as they are learning the curriculum, I

don't care about the method of delivery. If they are engaged, they are learning, and that is the whole point, it makes the day go faster."

Community Building

The idea behind the Community of Learners is premised on the notion that "in [this] environment children take charge of their learning, as their strengths and gifts rise to their potential" (Green, 1995, p.9). The building of communities of learners in classrooms can take various forms. Once the structure in classrooms is in place, students can take the lead in learning. Students engaging in games, student-centered activities and projects are a testament to whether true learning has occurred (Green, 1995). Community building is vital to children from poverty. Many of them come from homes where there is discord and educators must teach students how to work together. When students realize that working in teams means increased learning, fun, and the accomplishment of goals, there is no limit to what can be achieved in classrooms (Green, 1995).

As classrooms were observed, the first thing I noticed was the classroom configurations. Students did not sit in rows and no student was isolated in any corners. All of the classrooms utilized two main components. There was carpet time in which students worked with their learning buddies in turn and talk activities. The teacher would model the math standard for the day then students would move to their respective work stations. Students sat in pods of four or five where they worked with other students called their table partners. In these activities rules were established about how they were to speak to each other, express their ideas, and share their thinking and learning. Since the school year was relatively new, the teacher restated the rules of how to relate to each other in their table groups. Each classroom had their version of the school wide plan for fighting fair. Children are going to disagree, argue, and fight. The plan in each

classroom was to teach them how to disagree without attacking the person. Students were taught

how to address and resolve their problems.

Other community building activities varied from room to room. In the fourth grade room

the teacher utilized "paw points". The trick was to get the students to think as a cohesive unit

and not as individuals. When the students were caught doing good things and receiving praise

around the building, they would earn paw points. Therefore, it was not just the same few children

being rewarded every time. The more points they received the greater their reward at the end of

the month. Students earned pizza, ice cream parties, no homework tickets, lunch with the

teacher, and additional recess time. In the second and third grade classes they created classroom

competitions against each other utilizing their benchmark test scores and S.L.O. (Student

Learning Objective) results as a method for rewards. Students knew that they had to work hard

and as a team in order to beat the other class. They realized that they needed to help their

classmates learn the material because winning was a team effort and not individualized.

> Researcher: "How do you build a community of learners in your classroom and do you think it helps the learning process?"
>
> BH2: "Second graders are still pleasers. They generally do anything to make you happy. I find that simple things like changing their color groups or letting them sit with a friend allows them to work better. It is a give and take situation. They naturally at this age love each other; so little things like sitting them in table groups instead of rows, carpet activities, and partner centers for games, songs, and dance movements to lessons keeps them happy to work together."
>
> BH3: "I am an advocate of giving children choices about assignments, workstations, and partners. You are more likely to get them to work for you if they are happy. Choice allows children to feel that the classroom belongs to them and they are at home. Home is a community, so learning must feel like home. I think that they learn better in groups. They are able to 'turn and talk' and many times they can explain some things in a more simplistic manner than I can."
>
> Researcher: "Do you think it is a reflection of home that some of the children from poverty don't work well in groups?"

BH3: "Of course, but with anything. I think that these children need more structure and training. Many of them do not have good role models at home. Modeling is important. If you want them to do it, you must teach it to them."

BH4: "Fourth graders love to fight and argue. So when school first starts at the beginning of the year, getting to know each other, what happened over the summer in the neighborhood and last school year was helpful. I have many plans that are team building activities. If they are always fighting each other, then they will never learn anything. I find that children from poverty, and I have worked with them for a number of years, sometimes do not have the skills to work together."

Researcher: "What are some of your grouping activities?"

BH4: "Sometimes, I group them by gender. Girl drama can be the worst. They need to understand that we stand or fall together! Changing seating arrangements for games and activities also helps to build a sense of community. Even though they are generally from the same housing area some of them have never spoken to each other, played together, or gotten along for an extended periods of time. One thing that we do well as a school is our competitions for various activities. When you have classes competing against each other for a contest, performance, or benchmark scores, within my class they realize that the enemy is not in the class but across the hall or next door. They work better together because whatever the prize is serves as an internal motivation to win as a group."

Relationships

At-risk learners often lack long-lasting, stable relationships in their lives (Jenson, 2009). It is up to educators to build relationships of trust and respect. When students like their teachers and respect is mutual, students will complete the tasks that are before them. Educators can help students develop a healthy range of emotional responses in order to build healthy, stable, trusting relationships as a foundation for learning (Jenson, 2009). At-risk students from poverty frequently do not trust educators from different backgrounds from them. Furthermore, they do not understand the tasks that are being asked of them. Therefore, effective educators must alleviate misunderstandings in the curriculum and, subsequently, the fear this can engender. One way to do this is the relationship-building component. Once students know educators care and are not judging them, success and learning can occur. When individuals who made it out of

poverty were interviewed, many of them identified an individual who made a significant difference for them (Payne, 2005).

In the classrooms in which I observed, the most effective strategy was the building of relationships between students and teachers. There were instances of students who were having behavioral and emotional problems. Even though these problems easily were distractions from learning, the fourth grade teacher took time with the student and calmed them down as other students worked in center activities to complete their assignments. In interviews with these teachers they shared with me that some parents had requested them because they understood the challenges that their child faced. They wanted a teacher that could deal with their child's unique behavior problems. Teachers showed compassion and understanding for students in situations where frustration and annoyance could easily be displayed. In each teacher's classroom there were displays of pictures of teachers and students. Many of these displays showed pictures of teachers attending the extracurricular activities of their students. In the interviews with teachers, they expressed that they had attended church, football, basketball games, and conducted home visits over the holidays with students. These visits were not to discuss problems, but to celebrate the good things that students were doing in class. The most prolific examples of positive student teacher relationships shown were in small things such as students getting to eat lunch with their teacher and students names being entered in the "Caught Being Good" jar. Students can be recognized monthly for doing the right thing by their teacher. Students names are called over the intercom, published in the monthly newsletter, and given prizes. This recognition caused students to work harder toward academic and behavioral goals. Teachers have expressed that they are able to get more work and cooperation from students when their emotional needs are

met. The following excerpts from interviews provide specific feedback of interviewed teacher's responses.

> Researcher: "How do you establish effective relationships with parents of children from poverty?"
> BH2: "Many of the parents of my children are children themselves. I find that I must modify my tone. The authoritative tone that I naturally have is not helpful when dealing with adults. Many of them are so defensive. You just have to try to win them over as best you can."
> BH3: "When you have buy in from parents, they can be your best ally. Establishing a relationship with them early in the year is helpful. I also find that if you have taught a sibling or relative (cousin), the parents will generally trust your judgment more concerning their child."
> BH4: "I find that most parents of children from poverty must be approached in a friendly manner. They are highly defensive. I think they don't understand teacher jargon for the most part. I try to keep what I'm saying as simple as possible to try to avoid offending them. Getting them and keeping them on your side is the only way to make it. If the parent doesn't like you, then the kid is going to hate you in most cases."

> Researcher: "How do you establish effective relationships with children from poverty?"
> BH2: "Second graders are still in the, 'I love my teacher mode!' (Laughter) When they love and trust you, I know that I can get anything out of them. The key is getting them to trust you. If you can do that, they will work for you. I also tell them that I love them and many of them say it back. I don't think that they hear that a lot at home, because at first they are reluctant to say anything. They look at me as if they can't believe I said that to them."
> BH3: "Continually believing in them has always worked for me. Many of these children come from demeaning homes and atmospheres. A lot of them just need to hear that someone cares and believes that they can do great things. Their self-image is so badly damaged. Many times, I find myself going to their out of school functions like their Boys and Girls Club games and cheering for them. They need me to believe in them and they must be taught how to believe in themselves."
> BH4: "The bottom line with children from poverty is if they don't like you they will not work for you. Their need to be liked outweighs everything. So I like to laugh and have fun. I have established the joke of the day in my classroom. I tell a corny joke in the morning to get the class tone set for the day set in a positive manner. I don't take arguments and disagreements that they have with me and each other too seriously. I keep it all fun and light. I let it go! Each day is a clean new slate with them. Having fun and learning to laugh at myself in front of them makes the day so much better. Many of them come from homes where anger abounds for mistakes; I want school to be just the

opposite. I want them to love school and being grumpy and hateful is not going to make anyone like you. Children want to be happy, so I do what I can to establish an atmosphere of happiness for the children I teach."

In conducting this research, I found that teachers among the various grade levels strived to make learning fun and relevant for their students in various manners and according to their abilities and interests. In doing this, students learning in math improved procedurally and conceptually. Teachers were also shown assisting their students in developing their conceptual math abilities by posing questions and having students explain their thinking and justify their answers instead of just recording their answers in journals. Students in all classes were engaged in activities that taught them how to find answers to questions, but team work toward common goals were a central focus of community building. The most prolific example of commonalities among all classes was the relationships that were established between the teachers and students. In each classroom students were made to feel welcome. There was a genuine feeling between students and teachers that they liked each other. Teachers were champions for the success of each child and in turn students worked hard to please their teacher.

Summary

In summary, the findings of this study support previous research regarding characteristics of effective educators and their strategies when working with children from poverty. There is a significant amount of information to be gained from careful analysis of what effective teachers do each day in their classrooms when working with children from poverty. My theories and beliefs about education center on Dewey's theories of education and Glasser's control theory of motivation, which were quite apparent in all classrooms. Students were more engaged when motivated by their teachers and interested to do well on assignments in which they had some choices and saw relevance. These findings suggests that we are moving in the correct direction

in training teachers to work with students from poverty to reach and exceed proficiency levels, but there is still work to do. Many of our best and brightest educators who are graduating from colleges of education will encounter students who are rather different from themselves. So what are our next steps as educators? How might we prepare future educators to instruct the kinds of students they will be likely to encounter in their own classrooms, many of who are from poverty situations?

Chapter 5: Conclusion

Introduction

This research utilized elements of grounded theory sought to explore what characteristics effective educators who teach children from poverty possess and what strategies they implement that affect the learning of at-risk children. Based on a theoretical framework that emphasizes social construction of knowledge, effective educators' daily classroom practices and interviews were audiotaped and transcribed for data analysis. It was my intention that observing the characteristics of effective educators and the strategies that they employ daily would provide insight into how children from poverty can make remarkable gains academically. The analyses of the data show that educators employ a variety of differentiated strategies when teaching math to at-risk students from poverty. The personal characteristics of these educators varied, but the building of positive relationships with students and their families was broadly indicated as being a measure taken to ensure that their students were successful. The educators in this study indicated that they became more aware of their intentional practices and characteristics, due to these interviews and observations. My beliefs of how students who struggle in learning math were confirmed. I support learning that allows students to integrate their own creativity into all academic areas. I also believe that learning that activates as well as integrates a student's prior knowledge, and allows for the individuality of the learner to be considered. In individual interviews with educators, several stated that their own beliefs and practices were not stifled by the stringent mandates of how curriculum had to be delivered. They believed that they could place their own creativity in student lessons. This surprised me in that they taught the curriculum

according to the prescribed directives and made few negative comments about Guided Math. Educators believed that students when presented with the knowledge of the prescribed math components could build understanding for themselves.

Implications

Effective educators realize that they cannot create change alone, nor will alternatives to solving problems come from bureaucrats (Wagner, 2001). Educators realize that the needs of at-risk students are diverse, so the methods through which instruction is delivered must also be diverse. Mathematical comprehension and application continues to be an area that challenges children from poverty due to many factors. The fact that many of these children do not have the background or preschool experiences for math does not mean that they cannot make significant gains once introduced to methods that are easily applicable to their lives concerning the curriculum that is mandated by the state.

Additionally, changes in high poverty schools will only come through basic common sense principles about treating at-risk children with respect and teaching these children how to interact with the world. Effective educators must challenge the paradigms of all those who interact with at-risk children on a daily basis. With the increased pressure on educators and the educational system to advance, improvements must be achieved immediately. One way to do this is to change the way educators and students relate to each other. It is impossible to teach children anything of significance that they will treasure or remember unless some type of relationship is established with the children served, especially those who are at-risk.

Limitations

Qualitative research studies are designed to provide a deep understanding of a particular phenomenon, making the results difficult to generalize (Yin, 2003), but all studies have their

limits. The first limitation of this study arose from the novelty of looking at three teachers at a specific Title I school and their practices. Their experiences, though informative to the field of teaching, cannot be applied to all situations involving teaching at-risk students. Therefore, the results from this study contribute to the literature on teaching at-risk children, but are limited to those participants represented in this study.

This study is both gender and regionally specific. The participants are all women, which caused the data to reflect the voices of women educators. Their personal experiences do not necessarily apply to all women educators, who may have different perspectives on teaching at-risk children. In addition to this study investigating only women, the study was conducted in one particular southern state, in a small suburban southeastern city, at a Title I school. Effective teaching characteristics and strategies may be different for at-risk students in large urban or small rural areas. In reality, at-risk students are enrolled in all types of school settings from those which are elite to ones classified as Title I. Therefore, the needs of students who attend these schools would be diverse. With these factors in mind, I implemented this study with the understanding that my findings would not be widely applicable. However, the limitations of the study will not prevent readers from asking new questions and considering ways in which educators can effectively teach at-risk students.

There is also the limitation of observations being conducted only during school hours and in a classroom setting. The classroom can frequently be restrictive in demonstrating the power of effective teaching. Moments that impact a child's life may happen outside the classroom. Teachable moments happen at various times throughout the day, in many ways in and out of schools. Educators, who attend a student's sport activities or artistic performances, conduct

home visits, or tutor children after school or on weekends can have a profound impact on the children they serve.

Also, educators and students being observed may frequently not be as open in their relationships and interactions. Since this research was conducted with my colleagues, I was relatively confident that they were honest and forthcoming in their interviews. It is however possible that I am too close to those I observed to obtain an honest view of their effective teaching strategies. There are times educators underestimate their abilities and are not totally in tune to what they do on a daily basis that causes success in their classrooms.

My personal biases as a researcher contributed a second limitation to this study. My personal investment in the lives of these teachers and students began five years before the design of this research inquiry, and their stories were thus of particular interest to me as it relates to their development as professionals. Although I revealed my perceptions at the outset of the research, my concern for the professional evolution of teachers and the academic development of students may have affected my findings. A third limitation is the time in which the study was conducted. I collected data over the course of one semester rather than a full year. This prevented me from seeing changes in the methods and strategies of the teachers over an extended period of time.

Implications for Practice

Differentiated instruction

Through Tomlinson's (1999) differentiated instructional practices, teachers hold the potential to meet the needs of all students within the urban classroom setting. The needs of at-risk students can be addressed in math instruction by the simple modification of a basic technique in an educator's presentation. Adding in components such as hands-on manipulatives, literature, or relating the lesson to an everyday experience can assist students in improving their

understanding. Differentiated instruction does not mean creating several sets of lesson plans for each area of the curriculum. It simply means presenting the standards with strategies that address the needs of all students. At-risk students from poverty have a special need for differentiation to close the gaps that they bring to school due to their lack of life experiences. These children are totally capable of learning and exceeding the expectation of state standards, but strategies must be put in place to help them achieve success.

I believe that math educators who give students real world experiences with the subject matter will assist them in their understanding, application, and their ability to see why math is important in their lives. The teachers using Guided Mathematics state that this it is just one program that has proven to be successful with the children they teach. Even though each classroom in the school is required to incorporate the techniques of Guided Mathematics, the three observed classrooms consistently show higher levels of achievement in math. All classrooms are mixed ability grouped therefore; most teachers begin the year with children demonstrating the same skill sets.   Differentiated instruction of math is presented to students in several ways. The addition of literature in teaching math helps students who are strong readers but lack math understanding. The program hence focuses on the strengths of the individual.

Good (1983) defines the term "active teaching" as teaching that is responsive to students' needs and interests. As effective educators assess the needs of at-risk students, finding their area of interest is pivotal in helping them achieve success at school. Guided mathematics allows for math centers to be tailored around a student's area of interest such as music, video games, and sports. Mathematic centers can be constructed that not only engage students but also increase their motivation with content that is difficult. Once assessment has been completed, educators can create learning environments in which all learners can feel that they can flourish. There is a

strong correlation between student success and what educators do to prepare and present lessons on a daily basis. Once educators are able to engage students in their area of interest, learning cannot help but occur.

As an educator I realize that some students of poverty do not come from families that promote or value education. Therefore, it is up to educators to engage students in ways that meet their needs and motivate them to come to school because they never know what adventure awaits them. Using reality-based learning approaches for math instruction increases student understanding (Cole, 1995). Effective educators understand that many at-risk children fail to connect the curriculum and real-world situations. Educators who use strategies that teach math and relate it to the real world have an increased opportunity to bridge the gap between problems in a book and the inevitable question that many children ask, "When will I use this?"

For example, teaching fractions with manipulatives assists in student understanding. Guided mathematics includes components that allow students to see the process of solving problems and the concrete math that accompanies the algorithm. Students can use fraction rings, tiles, and transparencies to solve problems before moving into problem-based activities. These problem-based activities include using fractions in cooking, measurement of room dimensions, and their relationships to decimals in examples such as money. Once at-risk students see correlations between calculations and reality, math learning increases. From my experience as an educator and researcher, I realize that many students do not have parents who can give them the educational experiences that are needed as a foundation for school. I argue that math in upper elementary schools, with at-risk learners, should be taught through problem-based real-world learning. An entire unit presented in fifth grade that teaches percentages corresponds to calculating percentage discounts on clothing purchases, calculating simple interest rates on credit

cards, or mortgages rates on home loans. In this way, students are not only taught the math of

decimals, percentages, multiplication, and division, but also learning a valuable life skill.

Questioning

As the curriculum evolves, questions for at-risk students must move always from basic

recall to conceptual understanding. Learners must be taught how to think and given tools to

explain their thinking. Effective educators know how to elicit responses from students. When

questions are posed to students by teachers, they follow up not only with questioning strategies

such as using questions like "What made you say that?", but students are asked to explain their

thinking in detail. Educators must understand that in order for at-risk students to improve their

thinking, opportunities must be presented for students to discuss their thinking with others,

especially in math. Math concepts in which application and real-word concepts are taught

through questioning strategies can give students what they need to understand concepts.

Thinking routines are also a vital strategy for at-risk learners. Simply telling students to

think harder about something will not provide the understanding that is necessary; students must

be taught that thinking about something has a structure or a model to follow. In many instances,

at-risk students can feel that they are thinking clearly about a problem. I advocate providing at-

risk students with the tools that fill in the gaps that they have to correct misunderstandings. In

Math, students frequently have misunderstanding due to lack of experience. Educators must give

these students those experiences that correct thinking and provide clear understanding.

Community Building

As a researcher and educator, I uphold community building. Providing opportunities to

work together improves student learning. Classrooms in which at-risk learners are allowed to

work cooperatively have experienced academic gains (Slavin, 1995). Cooperative learning also

allows for misconceptions to be corrected. Whether learners are at-risk or not, there may be

fallacies in their understanding. When students are allowed to discuss what they know,

comparisons can be made between the knowledge bases of several students. Processes such as

these allow for educators and students who do understand the concept being taught to correct

areas of confusion.

The ability for at-risk students to talk about what they are learning is important. In many

homes at-risk students do not have the opportunity to take part in fruitful discussions. As an

educator, I know that I must teach students how to talk effectively and think about their thinking.

Teaching at-risk learners how to discuss their thinking enables students to become independent

thinkers and learners. Teachers' modeling effective "turn and talk" elicits the answers that may

be not only correct, but allow for students to deepen their understanding. Many at-risk students

lack the social behaviors that are usually taught within the home.

Various nontraditional educational strategies have been shown to have beneficial effects.

Educators who arrange their classrooms in configurations in which students can work as teams

experience an increase in learning. Learning in these situations cannot help but thrive. Social

behaviors that are taught by educators that allow students to debate their answers in respectful

ways can be used in life as well: many at-risk learners do not know how to discuss issues without

arguing or allowing their feelings to be hurt. The strategy of cooperative learning is not only

good for academic improvements but also teaches social skills that will be needed throughout

life.

Relationships

The most important measure in assisting the academic life of at-risk students is through

the creation, building, and maintaining of relationships. At-risk students' perceptions that their

teacher cares is a pivotal step in the learning process. Educators must realize that many at-risk

students come to school with problems relating to matters far more basic than the academic

world in which they operate. Many face hunger, homelessness, and abuse at varying levels. Too

many educators focus on meeting deadlines and passing state and national tests. While these are

important, student growth, and learning must remain primary. In these times of economic

distress and broken families, school is the least of the concerns for many at-risk students.

Educators who make home visits not only when students are having difficulty but also to

report positive progress and to provide support establish respect with parents and children. At

many Title I schools, there are support systems not only for students to be academically

successful, but also to provide the social support that many lack. Clothing, food, housing, and

health assistance have been provided by many educators to ensure that students come to school

and are ready to learn. As an educator, I realize that if all teachers get interested in the lives of

their students and families, the children will perform up to and beyond their abilities. Teaching

is more than subject matter, it is about caring. Educators who do it best know that and use the

power of love to overcome academic and social deficiencies in their students.

Kincheloe (2004) states "that nowhere are the obstacles to success and the existential

needs of the students as great as in urban areas" (p. 4). At-risk students in urban areas have life

experiences that many educators cannot even imagine. Educators who come from upper and

middle class backgrounds and work with at-risk children from urban areas in many instances do

not realize the life difficulties that they face. Violence is a major problem that educators must

deal with in order to help children. There are situations in which children are harassed for going

to school. Educators who want success for their students have in many circumstances picked

children up and taken them home in order to assist them to achieve academically. The violent

and abusive homes that many at-risk students come from also present a threat to children receiving a quality education. There are programs that have been established at the research site to help families and the child being abused. Children cannot experience true success until the family unit is fixed. Once assistance with the social and emotional needs of a family has been implemented, learning can occur and grow. Educators hence need to understand the concept of fixing the entire child.

School effectiveness is contingent on classroom success (Pollard-Durodola, 2003). In order to improve school experiences for at-risk learners, daily life experiences must be countered with a positive school life. The drudgery of the same lackluster school experiences must be avoided for at-risk learners. Effective educators know that not only must school be a safe and loving environment, but it must also provide a missing link or spark that motivates each at-risk learner to reach beyond their potential. Schools that are best at this have educators that create learning experiences and school activities that are missing in the lives of the at-risk learner. These types of learning activities give students opportunities to be exposed to the world around them that their parents cannot afford to provide.

Effective educators accomplished integrating learning activities at the research site in many ways. First, they implemented aspects of a STEM (Science, Technology, Engineering & Math) curriculum. Science and math are not taught from books and worksheets, but through hands-on real-world experiences and inquiry-based projects. Students are exposed to the actual career fields of Chemistry, Biology, and math and what people in these fields do on a daily basis. Many of the parents of at-risk students cannot afford extracurricular activities, and the research site has therefore implemented clubs such as chess, math, and sports clubs. Students look forward to these activities, and know that unless they perform well academically, they will not be

allowed to attend and participate in clubs on a weekly basis. The concept was instituted as an award system, rather than being punitive in nature. Students work hard to earn club points because they enjoy it and want to participate in the activities.

Effective schools of at-risk students realize that academic success is important, but that students are children. If they are to perform up to their highest abilities, award systems are necessary. The research site has also implemented academic carnivals in the fall and spring of the year. These activities are an integration of learning the curriculum in math, science, and reading in a game-based atmosphere. Students must answer questions and solve problems to participate in activities or move on to different levels of games. This activity allows for at-risk students to earn points based on meeting benchmarks, behavior, and the completion of school projects. These are days in which students, administrators, and teachers celebrate the rewards of hard work. Days of celebrations are a time where problems that plague the daily existence of children's lives can be forgotten and joy abounds. At-risk students also are exposed to the concept of community service. As much as they receive, there are also elements of giving back that must be taught. Community service was another element of the research site. They have days on which campus cleanup is held, food and toy drives, and fundraisers for children who are cancer patients are facilitated.

When teachers use student's cultural and social experiences as a means to implement best practices and to develop new knowledge, learning becomes more significant (Pardon, Waxman, & Rivera, 2002). Using student's cultures and backgrounds empowers them. At-risk children in many instances do not realize the power of their culture and ancestry. At the research site, African Americans who have made a significant contribution, such as scientists, inventors, and mathematicians, are introduced and integrated into lessons, not only during Black History Month

but on a weekly basis. If children have pride in their culture they will be successful

academically. The at-risk students that were observed had learned about G. W. Carver, Elbert

Cox, Mae Jemison, Dudley Woodward, Guy Bluford, and Ben Carson. The aim of this practice

was for these children to see what others had accomplished who had the same backgrounds as

them (many of these scientists and mathematicians grew up poor and from single parent homes)

and had overcome their adversities in order to be successful. Educators that were interviewed

and observed realized the power of exposing children to a list of diverse groups of successful

professional African-American besides athletes. The adults who work with these children

instilled in them the fact that there were alternative ways to financially and socially transcend

their life circumstances. Students are given the tools to follow in the footsteps of others through

school partnerships with BBBS (Big Brothers and Big Sisters), local fraternities, sororities, and

community leaders. The program by teachers gives students the realistic prospect that people

who are successful are not only in books, but are actual productive members of society who have

worked hard in the face of difficulties. Educators at this school have created mentorships with

African American doctors, lawyers, ministers, business people and college professors for

children who need closer assistance. The impact of this program has enabled at-risk students to

have hope and to see the actualization of their future dreams.

Engagement

Engaged learners are intrinsically motivated by curiosity, interest, and enjoyment. They

are likely to want to achieve their own intellectual or personal goals if they are motivated (Jabalo

& Wilkinson 2006). Math taught through graphic representations, visual manipulatives, and

games in the guided math classroom seek to engage the at-risk learner. The natural curiosity of

children can be further developed when educators challenge students' thinking. At-risk students

want to please those who teach them. The problem lies in the inability of the student at times to perform at the required levels. Once the foundation of the learning has been established, remediation or acceleration can take place and students can complete the required tasks.

Confidence is key for at-risk learners. These students frequently have failed at academic tasks or been told or made to feel that they are inadequate. They must be given the tools to be successful. Once the confidence of at-risk learners has been developed, these students can enjoy school and what they are learning. Once success has been achieved, students will want to experience more success. At-risk students will learn and are willing to take risks in anything that is asked by their teacher if it is presented in an engaging manner. This rapport is the critical motivational foundation for successful learning and development. As Noddings (1988) states, "It is obvious that children will work harder and do things – even odd things like adding fractions – for people they love and trust" (p. 4).

Dewey proposed that schools must be emergent communities of thoughtfully engaged youth who are working to solve problems that have meaning in their lives and will thus have meaning in society. He further proposed that schools should mirror life itself. By doing such, schools become a means of enlarging and enriching life experiences rather than being institutions divorced from personal experience and activity (Gerics &Westheimer, 1988). Educators' effective utilization of Guided Mathematics techniques in the classroom affirms the use, meaning, and application of math tasks. No longer are math classes solely a time for solving algorithms. Math problems are solved in mixed ability groups that are reflective of work places common in broader society. The types of problems that are solved not only have real world application, but are related to tasks that are meaningful in the lives of children. Guided math problems that involve fractions and measurement are based on life skill scenarios.

Educators understand the importance of immediate feedback for the at-risk learner. No longer can students turn in assignments and wait for the next day or later for an assessment of their progress. The authentic work tasks of Guided Mathematics call for the implementation of manipulatives and use of game devices in which students receive immediate individual levels of progress. The tasks that student are asked to perform in groups appeal to their levels of interest. Educators realize that finding a student's area of interest can be valuable and integrated into a stoic curriculum, whether it is music sports, or the arts. Engagement is key to the 21st century learner, and especially at-risk students, who may have little interest in school or see its value. Some of these students do not value the educational process in the same way as middle class or upper class students. Therefore, educators must engage them and build those connections between a student's world and the world they will face.

Resiliency

Educators who were interviewed for this research overwhelmingly focused on the lives of the at-risk children that they taught. Children who initially did not have characteristics of resiliency often developed these attributes through the year. Their teacher setting high expectations and placing trust in them affected their desire to improve and believe in themselves. A consistent description of turnaround teachers is their seeing the possibility and promise of a child. They do not use past behavior or current risks to predict future outcomes. "They hold visions of children that we could not imagine for them. They were determined that, despite all odds, their children would achieve" (Delpit, 1996, p. 199). Resiliency is also developed through the way teachers relate to the students they serve.

As an educator, I have seen firsthand how loving support meets the emotional and safety needs of at-risk children. "Resilient survivors talk about teachers' quiet availability, fundamental

positive regard, and simple sustained kindness – a touch on the shoulder, a smile, a greeting"

(Higgins, 1994, p. 324-25). For at-risk students, the giving aspect that some teachers rely on has

little effect on student outcomes. Quite often the material needs of these students are met and

exceeded due to various assistance programs. What is missing in the lives of many of these

children are loving adults. The kindness and support of an at-risk child and their family during a

difficult time of death, homelessness, abuse or personal tragedy makes a lasting impression on

children. Encouraging words when a student is having difficulty with subject matter supersedes

a material gift. Title I schools have resources for families in need. I have witnessed and been a

part of the power of educators of at-risk children supplying these youth with the emotional

support systems that enabled them to be successful in school and life. In order for educators to

get the academic gains they want, they must assist in meeting the needs of the children they

serve.

In my opinion, respect between educators and students who are at-risk is key to their

success. Respect means having a person acknowledge one for who one is, as their equal in value

and importance. This is highly recommended in turnaround relationships and schools, according

to Deborah Meier (1995), who transformed a high school in Harlem using resiliency best

practices. Educators do not have to understand nor agree with the lifestyles of the students or

families they teach. The key is to relinquish judgment and help at-risk children to become

productive members of society. Educators are not in the business of changing lifestyles, but

assisting in the development of character in students. If we want to change their conduct we

must model the desired behavior and not admonish children for behaviors we deem undesirable.

When tracked into adulthood, researchers worldwide have documented the amazing

finding that at least 50%, and usually closer to 70%, of these "high-risk" children grow up to be

not only successful by societal indicators but turn out to be confidant, competent, and caring

persons (Werner & Smith, 1989). This means that educators working in schools with at-risk

children often do not realize the power of their influence to tip the scale from risk to resilience.

Werner and Smith (1989) found that, "Among the most frequently encountered positive role

models in the lives of the children, outside of the family circle, was a favorite teacher; for the

resilient youngsters a special teacher was not just an instructor for academic skills, but also a

confidant and positive model for personal identification" (p. 162).

In conclusion, the relationships that are built between educators and at-risk children can last a

lifetime and be positive. If learning is to continue, the love of learning must be embedded within

the heart, mind, and life of an at-risk student for not only one school term but forever. Schools in

which at-risk students are a core population must adopt a school-wide policy that supports all

aspects of these children. This relationship is the main motivational foundation for successful

learning and development.

Future Research

This study lends itself to a longitudinal study in which the educators in this research are

revisited over the course of their professional careers. The re-examination visits would consider

their strategies of teaching math to at-risk students as well as the development of their

relationship-building techniques with the children they serve. Another area of further research

would be to examine the students who actually received the math instruction in order to analyze

their attitudes about the instruction that they were receiving. Furthermore, parental perceptions

of the children's teachers and the strategies that were used to instruct them in math could also be

analyzed to gain insight into what these parents felt about their child's knowledge of math. This

feedback would allow for an open discourse and add to the field of knowledge about what works effectively with at-risk students.

The geographical location of the study, southeastern United States, also impacted the results. Selecting educators and students who are representative of a wider geographical area of the US might result in an increase in the level of informative findings. Further research could also be completed at another type of school with at-risk students. The research site was comprised of an overwhelming majority of African American students. At-risk students of diverse racial ethnicities, such as Caucasian and Hispanic, who attend Title I schools could also be studied to identify what strategies worked with them.

Summary

In order to make significant academic gains in math understanding for at-risk students, more assistance needs to be implemented in Title I schools. These students are capable of being some of our best and brightest learners, but assistance is needed to facilitate the change we desire as educators. At-risk students who come to school lacking the foundational backgrounds in math must be supported. The understanding of math can only be accomplished through the use of various strategies that assist students in implementing what they learn in their daily lives. Unless at-risk students understand the process as well as the why of math, improvements will never take place. Guided Mathematics is one technique that has shown great promise in strengthening at-risk student's understanding. The processes call for educators to demonstrate math through a variety of strategies and techniques. The strategies used Guided Mathematics call for students to demonstrate their learning according to their strengths and engage them according to their interests. At-risk students who struggle in math but are good in reading are taught math as a language and through literature. Authors have created high interest level readers that engage

students and teach math beautifully at the same time. At-risk students need to perform math that relates to the real world through authentic problem-based math activities. These types of activities assist students in seeing the purpose and usefulness of everyday math. Authentic tasks give students the ownership of guiding the instructional focus of their learning. Educators are simply the facilitators who assist students in solving their questions.

At-risk students have a significant need for the caring relationship-building principles that were apparent at the research site. These educators not only attended to the academic needs of their students, but assisted in their emotional and social development as well. Encouraging words, talking with students about problems, and engaging them in activities of a mandated curriculum at their instructional level were evident aspects of the observed educators. In order to reach at-risk students and give them the educational experiences that they need, positive relationship building is the lifeline to creating future generations of independent learners and productive citizens.

As I sit and reflect at the end of each school day, I often wonder what impact I have made on the lives of the students that I have been entrusted to teach. I'm at times overwhelmed with paperwork, meetings, and the unreasonable demands of those who have no idea what I do on a daily basis. Then as I prepare for the next day, many times I find notes that read some of the following. "Ms. S., I love you.", "Can we talk tomorrow?", "My parents are getting a divorce and I'm moving to a new school, I don't want to go.", "I was afraid to ask for help in front of everyone else, can I stay after school tomorrow?", "Can you be my teacher again next year?" Then I all my apprehensions have been eased. I know that I am at home within the walls of Classroom 16. I am confident that I am making a difference. I believe with all my heart that no significant learning happens without caring and connecting with children where they are in life.

I know that if I just go the extra mile to assist them, then they will rise to the occasion. I feel like

Dorothy from the Wizard of Oz. "There is no place like home."

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Appendix A
CODE BOOK

Analysis categories of strategies that educators use for math instruction and relationship development with students

1. **Differentiated Instruction**

   The activities and lessons that educators design to teach students according to their strengths, areas of interest, and analyzes what math areas need to be enriched or remediated in support of the curriculum.

   > 1.1. *Math as graphic representations*: The educator's use of various pictures, manipulatives, activities, and games that teach math concepts.
   >
   > 1.2. *Math as language*: The educator's use of strategies that teach the unique vocabulary of math in diverse ways.
   >
   > 1.3. *Math as reading*: The educator's use of various children's literature that supports the understanding of math.

2. **Questioning Techniques**

   The educator's use and method of asking questions that elicit responses from students that enable them to go beyond surface level thinking and explain to their teacher and others the concepts that they are learning

   > 2.1. *See, think, wonder*: Allows the students to observe a math concept and form questions about the calculation.
   >
   > 2.2. *I use to think, now I think*: Allow the student to change their thinking and discuss misunderstandings.
   >
   > 2.3. *What makes you say that?*: Allows for students to elaborate on their thinking.

3. **Engagement Strategies**

   An educator's ability to engage students in various academic tasks and school activities that increase a student's interest in school and create lifelong leaners

   > 3.1. *Academic*: An educator's ability to increase student interest in academic content.
   >
   > 3.2. *Social*: An educator's ability to get students interested and involved in extracurricular activities.

4. **Community of Learners**

   An educator's ability to foster relationships within the classroom among students

4.1. *Social*: The educator facilitates activities that enable students to socially and positively work in groups.

4.2. *Academic:* The educator creates and engages students in activities that enables them to work together academically towards a goal.

5. **Relationship Building**

An educator's ability to foster positive productive connections with students that enable growth to be shown academically and socially

5.1. *Social*: The educator supports children in activities outside of school hours.

5.2. *Rapport:* The educator supports children and is nonjudgmental in understanding their culture and backgrounds and building bonds with them.

5.3. *Community:* The educator interacts in community activities that support the school and students.

5.4. *Family:* The educator interacts with the families of their students to assist in various methods.

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Curriculum and Teaching

(NOTE: DO NOT SIGN THIS DOCUMENT UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)

**INFORMED CONSENT
for a Research Study entitled
"Effective Teaching in High Poverty Schools"**

You are invited to participate in a research study to examine the characteristics of effective teachers and the strategies they use when teaching in high poverty schools. The purpose of this study is to identify and describe characteristics of effective teachers working in high poverty schools. The study is being conducted by Amy Elizabeth Stenson, Ph.D. Graduate Student of Auburn University under the direction of Dr. Theresa McCormick in the Department of Curriculum and Teaching in the College of Education at Auburn University. You were selected as a possible participant because you are a teacher in a high poverty school and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to participate in two interviews and allow me to observe you teaching a class no less than two times. The first interview will be conducted at your convenience after school and will last no longer than 45 minutes. The interview will be audio recorded for the purposes of confirming my notes during the interview. After the interview, we will set up times for me to observe you teaching. The observations will be video recorded in order to confirm my notes.
During the last interview, you will be given the opportunity to examine the video recording and I will ask clarifying questions as to your choice and rationale for using specific teaching strategies. The last interview will also be schedule at your convenience and should not last over an hour. Your total time commitment will be approximately 2 hours. All audio and video files will be destroyed once my researcher notes are confirmed.

There are no risks or discomforts associated with this study. There are no direct benefits or costs associated with this study or compensations for your participation.

Participant's initials _____

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Curriculum and Teaching or your school system.

Your privacy will be protected. Any information obtained in connection with this study will be confidential and not shared with your peers or school administrators. The written results from the study will not use any identifiable information.

If you have questions about this study, please feel free to contact Dr. Theresa McCormick by phone (334)-844-6795 or email at mccortm@auburn.edu or Amy Stenson at aes0016@auburn.edu. A copy of this document will be given to you to keep.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO PARTICIPATE.

_____   _____
Participant's signature   Date   Investigator obtaining consent   Date

_____   _____
Printed Name   Printed Name

Appendix C

INTERVIEW QUESTIONS

Introduction:

Hello, thank you for participating in this research project.

I am interested in learning what qualities are especially important for a teacher to be effective with students at high poverty schools.

- How many years of teaching experience do you have?

- What is your highest degree level achieved?

- What professional development activities or school leadership activities do you participate in?

- Why did you become a teacher?

- Can you describe the factors that you experience in the classroom that contribute to a student being at-risk?

- How would you describe your relationship with your students?

- What role does that relationship play in your success as a teacher?

- How do you ensure that your classroom environment is conducive to learning?

- How do you address the needs of at-risk and with classroom management?

- How do you create a learning community with at-risk students?

- Describe your math instructional planning process.

- What questions do you ask yourself as you prepare a math lesson, a unit, a course, or any other learning experience for students who are from poverty?
- To what level of detail do you develop your lessons to integrate learning styles or

  multiple intelligences using the guided math program?

  (How do you differentiate your lessons using the guided math model?)

- How do your teaching methods promote understanding and skills development in the content area(s) you teach?

- What math strategies do you find most useful in working with students from poverty?

- What math needs do you see most frequently with at-risk students from poverty?

- How do you use math questioning skills with at-risk students?

- How do you maintain student engagement throughout a math lesson?

- How do you respond to the range of student differences in the learning of math in your classroom?

- What do you do to support students who are from poverty who struggle in math?

- How do you assess math learning for at-risk students from poverty?

- What challenges and what strategies have worked with students from poverty in teaching math?

- What external supports or resources beyond your classroom do you use to address the needs of students from poverty when teaching math?

- What types of interaction do you have with parents to support you in teaching math?

- What evidence do you examine to evaluate the success of your teaching math?

- What do you find to be your greatest challenges in teaching math to at-risk students from poverty?

- How has your teaching of math evolved over time?

- Create a metaphor (or a philosophy) that describes how you think about teaching students who are from poverty.

- How does this metaphor (or a philosophy) illuminate key aspects of your teaching?

- Have you received any teaching awards or accolades?

- What do you think was the most important factor in your teaching that led to your achievement of that award?

- What recommendations would you make to prepare new teachers to work with students from poverty?

Thank you for your time--