THE EFFECT OF SUPPLEMENTAL EDUCATIONAL SERVICES
ON STUDENT LEARNING OUTCOMES

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THE EFFECT OF SUPPLEMENTAL EDUCATIONAL SERVICES
ON STUDENT LEARNING OUTCOMES

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Dissertation

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This research study investigated the effects of Supplemental Educational Services (SES) on student outcomes. A secondary focus evaluated the strengths and weaknesses of specific program services, and offers findings concerning SES provider contributions to student outcomes. Data were collected, ex post facto, from two district SES providers. Learning gains on academic assessments for reading and mathematics, pre-test and post-test scores for mathematics, survey responses, and observations produced from 2004-2007 were used in this investigation. The evaluation consisted of eight samples which were representative of SES students in Ohio. SES were offered, in-house, by school districts functioning as providers.

This study yielded relevant and applicable findings regarding student participation in SES, student achievement, and provider practices. A meta-analysis was conducted to investigate the relationship between student achievement gains in reading and participation in SES. Six studies were used in the meta-analysis with a total of 395 participants. The combined weighted effect size was \( r = 0.48 \), which Cohen (1992) considers to be a medium effect. A meta-analysis was conducted to investigate the student achievement gains in math. Two studies were used in the meta-analysis, with a total of 136 participants. The combined weighted effect size was \( r = 0.04 \), which Cohen (1992) considers to be a statistically insignificant.
The meta-analysis provided evidence that SES has the potential to affect student learning outcomes in reading when implemented according to the provider standards outlined by ODE. The effect size indicated that participation in SES may produce a medium effect on learning outcomes, especially in the content area of reading. Learning gains were compared to parent survey responses and indicated that communication was a main element in increased student achievement. This finding was replicated in the qualitative analysis of administrative, teacher, and parent surveys. Classroom observations supported the premise for tutoring to increase student achievement by students having more one-on-one access with teachers. This study demonstrated that the effects are tied to provider practices and implementation. Communication was found to be critical to success.
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CHAPTER I
DEFINING THE PROBLEM

Introduction

Historically, the No Child Left Behind (NCLB) Act of 2002 is the largest kindergarten through 12th-grade federal education program. The purpose is to reform the educational system and to improve student outcomes. NCLB represents a restructuring and redirection of federal efforts to support elementary and secondary education. In the past, federal policymakers supported state and local control rather than federal legislation that direct state and local actions. The federal government has appointed itself to a primary role in regulating education while the state has been relegated to a secondary position. As a result of the expanding federal role, NCLB has raised fundamental issues regarding who controls education (Sunderman, Kim, & Orfield, 2005).

Behind the actions taken on behalf of NCLB lie four principles. First, the law provides an accountability system that identifies underperforming schools. A fundamental component of accountability is testing; NCLB put in place a system of testing to validate school effectiveness and holds schools and districts accountable for student learning. Many educators advocate this type of approach; i.e., one that designates a specific and well-planned curriculum and uses tests to determine the extent the
curriculum has been taught and learned (Glickman, Gordon, & Ross-Gordon, 2007; Ravitch, 1985; Walberg, 2001).

Second, the law increases the opportunities for students who are in schools that are deficient in the subject areas of reading and math. Two school options given to parents in underperforming schools are school choice and Supplemental Educational Services (SES). Through these options, students are provided with more opportunity to get the help they need.

Third, the law increases the capacity for students to become proficient. NCLB policymakers have set a target rate of 100% proficient by 2014. By improving the overall effectiveness of the public school system, the path is potentially cleared for all students to become proficient.

Fourth, the law attempts to reduce the achievement gap among subgroups of the population. A key feature of NCLB is the goal of narrowing the achievement gap between white and minority students by using a federally-required set of measures. States and school districts must report on the progress of specific subgroups of students (e.g., racial/ethnic, impoverished, disabled, and limited-English proficient).

Under NCLB, every state is required to set standards of academic content and measure each student’s yearly progress in the core subjects of reading, math and science. Adequate yearly progress (AYP) is the determinant of school improvement. A school that fails to meet AYP is classified as in “improvement” status. Schools identified for improvement are subject to a series of sanctions. Sanctions are based on markets and privatization theories (Sunderman et al., 2005). Schools in the first year of improvement are required to offer to all students the option to transfer to another school not in
improvement status. Students in schools in the second year of improvement are eligible for Supplemental Educational Services (SES).

Both public school choice and SES are provisions of NCLB intended as corrective action for schools identified as needing improvement. Parents of eligible students are notified by their child’s school and may select from a list of qualified providers (Kruse, Liang, & Beese, 2006). Students that come from low-income families attending Title I schools, whether or not they performed at proficiency, are eligible for SES (Corwin & Wilhelm, 2006). In circumstances where only a limited number of students can be provided services due to financial constraints or other limitations, priority is given to the lowest achieving students.

SES are educational activities provided outside the normal school day, designed to enhance the educational services that are provided during a regularly scheduled school day (Kim & Sunderman, 2004; Smole, 2006a). In simple terms, SES is after-school tutoring. Since 2003, the SES school option has afforded students in failing schools access to tutors where they can get assistance in reading and math. SES providers can vary by type. Providers can be district or school programs or private tutoring businesses. All providers must be approved by each state’s Department of Education and aligned with the state’s reading and math content standards.

The money to finance SES is provided by redirecting Title I funding. The former goal for Title I was to provide educational opportunities for identified groups of disadvantaged children. This goal has now shifted to individualized access to educational programs. NCLB requires districts to set aside twenty percent of their yearly Title I allocated funds for school choice transportation and SES (Kim & Sunderman, 2005).
Districts in improvement status are required to spend a minimum of 5% of the total set aside on SES. According to the U.S. Department of Education (2005e), “The per-child cost for Supplemental Educational Services is determined by dividing the district’s Title I, Part A allocation by the number of children residing within the district aged 5 to 17 who are from families living below the poverty level” (p. 19). Costs paid out for SES are strictly related to provider fees. Title I funds are not permitted to be used for administrative costs or any other cost associated with implementing SES within a school or district. This controversial aspect of SES funding has resulted in claims that NCLB is an unfunded mandate.

Many educational leaders and state and local officials are critical of NCLB policies. In an effort to establish accountability, schools have drastically narrowed their curriculum becoming intently focused on teaching reading and math (Fletcher, 2005). The system seems unresponsive to problems and views all the schools the same. Furthermore, fiscal considerations may discourage districts from promoting NCLB’s choice options. The more that students pursue these options, the more districts will have to devote the mandatory 20% Title I budget set aside to SES programs rather than to programs already in existence with the likelihood that even 20% will not be adequate to cover the cost (Finn & Hess, 2004).

SES was established to be regulated by the state and local school districts in an effort to increase individual students’ academic achievement through after-school tutoring for students in schools classified as needing improvement. Does SES increase student learning outcomes in reading and math? The effects of SES are unknown. The earliest implementation of SES was during the school year 2003-2004 and the impacts of
which are in their infancy. This study seeks to develop insights concerning the early impact(s) of this program.

Theoretical Framework

For too long, America's education system has not been accountable for results, and too many children have been trapped in underachieving schools and consequently “left behind.” Information is power. Testing and gathering independent data are the ways to get information into the hands of parents, educators, and taxpayers. Many programs have tried to level the “educational” field by providing funding to make educational opportunities for “at-risk” students available. With No Child Left Behind, a new approach is being tested; school choice in the form of transferring students out of underachieving schools or Supplemental Educational Services.

SES is an after-school learning program designed to help at-risk children master the basics of reading and math. Parents who enroll their child in supplemental tutoring services assist them in developing the skills needed to reach proficiency in reading and math. Under NCLB, SES providers are given the freedom to designate their own methods of instruction and practice. Each provider must demonstrate alignment with state content standards for reading and math before being approved as a provider for a school or district.

SES is an after-school tutoring service for students at all levels of academic ability from elementary through high school. Tutoring services can vary by provider within a school, district or state. Tutoring services are not one size fits all. Parents select the provider they feel best suits their child’s needs. Most tutoring programs begin with a skills assessment that provides information regarding the academic
strengths and weaknesses of each child. From that assessment, an individualized learning plan is developed for the student. A skills assessment presents a picture of the academic strengths and weaknesses of that child. In doing so, the provider can discover the causes of academic frustration by pinpointing the specific skill areas where a student is experiencing difficulty. These weak areas lead to academic underachievement or falling behind in school. Another requirement of SES providers is a carefully developed learning plan, individualized to focus on identified weak areas. Clearly stated goals are set for each of these areas. An on-going review of goals and objectives closely tracks the student's work. Continued assessment is an integral part of the program.

Why will tutoring work? There are many reasons for SES to be a successful component of NCLB. First, the low student-teacher ratio ensures immediate and individual access to instruction. Students receive the personal attention they need to achieve grade level standards. Students begin with a diagnostic placement test; instruction begins with work that is at their level of competence, as opposed to being in a large classroom trying to keep up with other students, and as a result falling further behind. Study habits and concentration are thought to improve because of the one on one instruction. It is hoped that this approach to instruction will guarantee better comprehension and retention of concepts and establishes a strong foundation in content areas. In theory, a good tutoring program will help students succeed. Because tutoring is based on developmental readiness and appropriate instruction, SES is being used clinically to increase learning in reading and math. One would expect SES to be helpful
in improving students’ academic achievement and school aspirations for students in underachieving schools.

Statement of Purpose

Few studies have been published that report the effects of Supplemental Educational Services on student outcomes. This study provided guidance to SES program development and may influence the instructional design of future SES programs and program evaluation. Specifically, this study added to the body of knowledge on educational reform to better understand and leverage the full potential of SES programs.

Does SES work? The effects of SES are unknown; data can serve to clarify program impact; should findings indicate SES has positive impact on student gains, policymakers and educators can use this information for program implementation and design. SES is a federally mandated sanction of NCLB that is under review in 2007, and this study provided knowledge pertaining to the effects of SES that will assist policymakers in policy revisions, now and in the future (Kruse, Liang, & Beese, 2005, 2006; Kruse, Liang, & Widenbaugher 2004; Smole, 2006a, 2006b).

Despite the potential of school choice programs, there are essentially no data to support the intended consequences of SES implementation (Smole, 2006). Much of the data collected to evaluate SES programs is rudimentary at best. There is growing concern regarding the lack of empirical research and an articulated need for a research agenda concerning education policy and practice (Bowe, Cronin, Kingsbury, & McCall, 2005; Corcoran & Goertz, 2005; Elmore, 2004).

Good research follows a process that is purposefully grounded, the purpose having been clearly contemplated and used as the foundation for the research design
(Newman & Ridenour, 2000). The purposes of this study were: (1) to add to the knowledge base, specifically, information regarding the overall impact of SES; (2) to measure change between student learning gains in reading and math; (3) to measure the change in student outcomes (i.e., attendance, student participation in school, completion of homework assignments, etc.) after participating in the SES program; (4) to examine the relationship between standards for provider practice and student learning outcomes; and (5) to examine parent and teacher perceptions of the impact of SES on student learning outcomes. With any policy change, it is important to monitor the impact of that change and to evaluate the value of new programs. The researcher proposed the findings revealed in this study would shed some light on the value of SES as related to student learning outcomes.

Statement of Problem

The primary focus of this study was to investigate the relationship between SES and achievement gains in a representative sample of SES students within Ohio and to identify strengths and weaknesses in provider practices that contribute to student learning gains.

This study examined SES effectiveness. More specifically, this investigation tested the relationship between SES participation and increased reading and math achievement. Furthermore, it supported (triangulate) data by surveying classroom teachers and parents; interviewing classroom teachers and parents, and observing tutoring sessions. The following research questions guided the study:
General Research Questions

1. Is student participation in Supplemental Educational Services positively related to increased student achievement?

2. Is there a statistically significant relationship between the standards, included in the parent survey, and student learning gains in reading and math?

3. In what ways do teachers report their attitudes toward SES since the enactment of NCLB? What factors contribute to the differences in these perceptions?

4. In what ways do parents report their attitudes toward SES since the enactment of NCLB? What factors contribute to the differences in these perceptions?

5. In what way do SES classroom observations contribute to the differences in these perceptions?

Operational Definitions

The following terms have been defined operationally for this study.

Interviews - Oral questions asked by the interviewer and oral responses by the research participants (Borg, Gall, & Gall, 2003).

Learning Gains - Significant, essential, transferable, and verifiable learning that must be demonstrated to receive credit for a course or unit.

Participant - 1. A student who enrolls in Supplemental Educational Services receiving approximately 40 hours of tutoring service during the course of an academic year. 2. An individual who answers questions in a survey or interview.

Respondent - An individual who answers questions in a survey or interview (Vogt, 1998).
Sample - A research design in which a sample of subjects is drawn from a population and studied (usually interviewed) to make inferences about the population (Vogt, 1998).

School Community/Stakeholders - Those members of the school community who directly affect or are affected by the educational success of a school. Stakeholders may include but are not limited to Colleges and Universities, Diocesan and School Staff, Employers, Parents, Students, and other individuals or groups in the community.

Standards - Learner outcomes, similar to objectives, specify what students are expected to know or be able to do because of the educational process.

Standards Based Reform - To outline the skills and knowledge each student should know at every grade level, using this outline to align curriculum and instruction by setting standards to track and assess student progress (Klein, 2006).

Supplemental Educational Services - SES are educational activities provided outside of normal school hours designed to enhance the educational services that are provided during a regularly scheduled school day and increase academic achievement of students in low-performing schools (Kim & Sunderman, 2004; Smole, 2006a)

Supplemental Educational Services Provider - Independent tutor services as well as local schools and districts following approval by their state department of education. Qualified providers serve students within the jurisdiction of the LEA where students attend school and are chosen by the parents (Kruse et al., 2005, 2006; Kruse et al., 2004; Smole, 2006a).
Survey - A study of a sample population (has been selected to represent a population to which the findings of the data analysis can be generalized) that uses questions or interviews to collect data (Borg et al., 2003).

Validity - The quality of actually measuring the behaviors, which the instrument is, designed to measure (Newman & Newman, 1994).

Limitations and Assumptions

The data for this study were collected as part of the SES Evaluation Project conducted by The University of Akron on behalf of the Ohio Department of Education from 2004-05 to 2006-07 academic years and was a sample of convenience. The first year of the evaluation occurred at the same time as the first year of SES implementation. The sample for that year (2004-05) reflects the low SES participation rates that occurred nationwide. SES experienced a 7% participation rate in its first year (David et al., 2006). The low number of participants in this sample, for the first year, ruled out several statistical procedures as well as compromised statistical power. The sample was limited to two providers serving two school districts and was a much smaller representation of a much larger population.

The participants were identified by the Ohio Department for Education for the SES Evaluation Project. Data were collected ex post facto. In ex post fact design, one cannot assume causation or manipulate variables. Therefore, the researcher had no control over the number of participants or the number of providers used in the study. The schools and students were limited to districts and schools in academic watch.

The researcher examined 3 years of the evaluation project’s results and performed a meta-analytic review that estimated the overall impact of SES in predicting increased
student achievement. Given the limitations of potential ambiguous conclusions, underweighting of particular samples, or failure to consider measurement error, it was worthwhile to consider the actual effect sizes once sampling and measurement error had been taken into account (Hunter & Schmidt, 1995). The meta-analysis was limited to the evaluation project samples and did not take into account studies that have not been reported or are outside the project’s realm.

The participants originated from schools that are Title I eligible, high poverty, and underachieving schools. According to the U.S. Department of Education (n.d.e; 2005a), national comparisons have established SES populations are similar in composition. The participants in this study were a homogenous group comprised of primarily high poverty, low achieving, and minority students.

Several assumptions underlie this study. First, the participants were representative of the SES population from across the country. Second, the SES Providers were representative of the population of SES Providers from across the country. Third, the reflections and thoughts generated during interviews truly reflected the participants’ thoughts. Fourth, it was assumed that the error in reporting grades and effects of SES were randomly dispersed. Fifth, it was assumed that the SES provider practices were accurately reported.

Summary

The increase in federal funding through NCLB have been significant; however, after 4 years of implementation, SES participation rates have increased to only 17% of eligible student nationwide (U.S. Department of Education, n.d.e). Restructuring educational policy must take place after due consideration and preparation. To assess the
outcomes of new educational programs they must be designed to provide sufficient and meaningful data. Data should be comparable and comprehensive. This multiple methods study investigated the effect of SES on students’ actual learning outcomes and the strengths and weaknesses associated with those outcomes. This research was critical to the mission of evaluation and improvement of the public education system and program implementation.
CHAPTER II
REVIEW OF THE LITERATURE

School quality has a direct impact on individual earnings and overall economic growth (Hanushek, 2001). Individuals and society invest in education as an approach to economic growth and development. They work to acquire skills relevant to the labor market; these skills are representative of the human capital of an individual. There is significant evidence that education is an influential factor in income level, employability, incarceration rates, voting frequency, health insurance, volunteerism, charitable contributions, leisure activity participation, cultural activity participation, childbirth in marriage versus out of marriage, prenatal care, and crime victimization (Kaplan & Owings, 2004). Education affects people’s income over the entire course of their working life. Improvements made in the public education system have been shown to provide high economic returns. In public education, parents and public officials act as trustees for their children by setting the course of investment paths. A better-educated society has a higher level of economic growth and an increased standard of living (Hanushek, 2004).

The discrepancies in economic, political, and social progress in many countries can be attributed to public investment in education (World Bank, 1993). Although the U.S. economy has led the world market for many years, there are concerns about the
future (Governor’s Commission on Higher Education & the Economy, 2004). The likelihood that the public school system will produce individuals competitive in the world economy is unsubstantiated (Bracey, 2002). Traditionally, the U.S. economy has been built with a skilled labor force therefore, capitalizing on the presence of skills, making human capital investments the core component of economic superiority to other nations (Hanushek, 1998). By 2012, employment in science and mathematics-based occupations are expected to increase four times the rate of other occupations (Daggert, 2005). Measured achievement is closely related to individual productivity and earnings (Hanushek, 2004). Do our national assessments demonstrate that our students are skilled in these areas? According to the National Assessment of Educational Progress, U.S. students rank below the median.

While most Americans agree that the education of our children is one of the most important issues facing the United States, funding of our public school system represents an enigmatic challenge. Across the country, educators, politicians, parents, and taxpayers are facing the critical issue of how to fund and reform public schools. At its core, the issue is about fairness and equity in the distribution of educational resources, adequacy of funding, and the efficient use of resources. It also reflects our level of commitment to public education and to the civic principle declaring that all citizens receive a sufficient education (Crawford, 2004).

All states are constitutionally required to provide public education for their residents. This requirement is often accompanied with the specifications that schools are equal, adequate, and efficient (Howell & Miller, 1997). A legislative example of equity can be found in the Ohio State Constitution. It assigns the general assembly with the
responsibility of establishing through taxation or otherwise a thorough and efficient educational system further defined as a perfect and efficient system of education offered throughout the state, of common schools. The term common school implies equality.

The constitution also states, no law shall be passed that prohibits the poor from receiving educational opportunities (McKinney, 2005). Therefore, law mandates the establishment of a common school system that provides the same education for all children. Public school finance mechanisms differ from state to state, and the amount of money provided per pupil varies tremendously from one state to another.

Schools that serve neighborhoods with predominantly high-income and well-educated residents are often better funded and able to provide students with more educational resources than schools in neighborhoods with predominantly low-income and poorly-educated residents (Smole, 2006a & 2006b). The discrepancies between wealthy and poor districts have caused a separation of excellence and equity in education (Hanushek, 1998; Orfield, Bachmeier, James, & Eitle, 1997; Valencia, 2003). The ability for school districts to raise revenues from property taxes is different district to district due to the variations in property wealth. In Ohio, the state funding formula figures state aid as a defined amount of revenue per child in addition to calculating a local share of that amount for the school district to secure based on property valuation (Maxwell, 2006).

Schools located where property values are low, typically receive more state funding on a per-pupil basis than schools where property values are high. The result of the current funding formula is a heavy reliance on local tax support. A school levy is based on millage or one tenth of one percent of local property value. Operating millage is not transferable from one district to another. For example, in Ohio, residential/
agricultural real estate is assessed at 35% of total market value -- 35% of $1,500,000 total value equals $525,000 in assessed value for tax purposes. A school district with an effective millage rate of 32 mills collected on $525,000 of taxable value results in $16,800 in gross operating revenue (Maxwell, 2006). A school district with the same effective tax rate collected on $400,000 of taxable value would generate $12,800 gross operating revenue. Local property taxes have served as the basis for public school funding with additional financial support coming from various state-level taxes. Polled state officials declared the most pressing school finance issue was the reliance on property taxes and the resulting problems of inequities this type of funding promotes (Crawford, 2004).

More than 40 states have or are addressing school finance reform. One type is categorical funding, which provides money for educational equity programs through the identification of students whose needs warrant additional financial resources to improve their educational status (Rodriguez, 2004; Timar, 1994). These funds are both federal and state provided, earmarked for specific needs such as special education or compensatory services to high-poverty schools (Howell & Miller, 1997). Categorical programs supported with federal aid include, Title I-Improving Basics (including Head Start and Supplemental Educational Services), special education, vocational education, Goals 2000, School-to-Work, the Technology Literacy Fund, Charter Schools, and Gifted and Talented Education (Howell & Miller, 1997). While many of these programs are state-supported, the state supports other programs as well, such as bilingual education, small district size compensation for failing or growing enrollments, and many more.
These programs create major shifts in funding, as large amounts of money are made available for specific programs that are costly to administer.

Another example of categorical funding is Head Start. Head Start began in 1965 and was the earliest attempt to fight poverty by providing early childhood education programs to underprivileged children. Children who participate are part of a comprehensive program that includes aspects of health, education, and social services. Head Start programs emphasize psychological development, provide education for parents, and provide medical and dental treatment in an effort to get a child ready to start school. Research suggests the Head Start program has made a difference and children do attain higher levels of education, economic status, and demonstrate greater social responsibility (Oborn & Shipley, 1996). For the efforts of educators who work with categorical funding to reach their goals and not become pawns in a political struggle for increased funds, policies and procedures must be established that address program development and implementation. The initial stages of any program should include constant examination as to whether or not resources are being used efficiently.

Effects of Increased Funding

While most citizens support policy changes that close the gap, an overwhelming majority believe that these gaps are a result of factors unrelated to the quality of the public schools, such as home and community environment, or lack of student interest and parental involvement. The public is divided as to whether schools should spend more money on at-risk children. The public is not convinced that equitable schooling will close achievement gaps and ensure social mobility and a fairer, more stable society.
Per pupil, expenditure has roughly quintupled each 50-year period between 1890 and 1980. Following a Nation at Risk (1983), there has been a fifty percent increase in pupil expenditure. Despite this increase in spending, U.S. students continue to rank low in international comparisons (Friedman, 2005; Vedder, 1988). As we shall see, resources alone do not yield systematic returns in student performance. Betts (1998) calculated the rate of return to additional school district spending based on past performance and the current structure of schools; he found additional spending on school appears to have a net negative rate of return. Hanushek (2004) describe the efforts of educational reform as same operations with greater intensity.

In 1999, a series of papers published by the Fordham Foundation expounded the concept of “portability” (Kanstoroom & Finn, 1999). In one paper, Ravitch (2001) argued that Title I funding had created an unwieldy bureaucracy and that one way to cut down its size was to allow dollars to follow the child in the form of a per-pupil allocation. Senator Gregg proposed a reauthorization of ESEA and Title I in 1999-2000. This proposal included the ability to purchase educational services from outside instructional service providers. NCLB did not adopt the idea of portability but did retain the idea of purchasing educational services from outside providers in the form of SES. The decision to adopt SES was not based on previous experience or research but represented a political compromise between supporters and opponents of vouchers. Since Title I funds often support instructional interventions, diverting funds to SES may negatively affect the ability of schools to continue with already established instructional programs that have proven to benefit disadvantaged students and potentially increase the already wide achievement gap between minorities (Kim & Sunderman, 2004).
With NCLB, there have been even more unprecedented and dramatic funding increases. These include:

- A 29% increase in total Federal expenditure for education from $42.2 billion in 2001 to $54.4 billion in 2007.
- A 33% increase in total K-12 funding from $27.3 billion in 2001 to $36.3 billion in 2007.
- A 40% increase in NCLB funding from $17.4 billion in 2001 to $1.2 billion in 2007 (U.S. Department of Education, n.d.a).

Although President Bush has overseen record spending in education through NCLB, many people contend there remains a shortfall in the funding needed to meet the mandates of the law (Fletcher, 2005). A lawsuit filed by the NEA regarding the imposition of unfunded mandates, stipulates the federal government cover the costs associated with measures imposed on states. It further recommends amendments that would provide more time for improvements and a broader definition of student outcomes (Gehring, Hurst, Jacobson, Olson, & Trotter, 2005). Furthermore, the Indiana Department of Education appealed for schools to be released from as much regulation as possible. This in an effort to pursue academic achievement, develop support for the initiative and align funding to facilitate it (Bell, Plucker, Prendergast, & Spradlin, 2006).

As Bell et al, (2006) challenge, “With less funding and more mandates, they [the federal government] are setting the schools up for failure” (p. 7).

While 13% of all schools are Title I, more than 60,000 schools serve low-income students. High poverty schools have disproportionately fallen short of AYP requirements
with large urban districts often being categorized as in need of improvement. When schools fail to meet proficiency, they must undergo corrective action and restructuring required by law. Sanctions placed on schools often affect their budget, either by reducing the number of student or by redirecting funding. The incentive to comply with NCLB mandates is great. In exchange for demonstrating academic results, schools receive federal funding. If a state refuses to meet the terms all federal funding related to NCLB is null and void. For example, the state of Virginia would stand to lose $330 mill per year (Sunderman & Kim, 2004).

While most citizens support policy changes that are made to improve public education, the public is undecided on the amount schools should spend to achieve those aspirations. What can educators discern from past and present educational reforms to build a more effective system of education? What are the most equitable and efficient means to improvement? How should we invest and allocate resources so all students can achieve at levels of proficiency? We must look beyond fiscal inequities and determine connections among student outcomes, student cultures, and educational progress. Is preparing our students for economic realities too narrow a purpose? The enduring strength of the American system of public education has always been the recognition that schools exist for moral and social reasons, as well as academic instruction. Political pressure has refocused our efforts from educating a whole child to measuring the academic achievement of our students through standardized tests.

American Public Schools and Academic Achievement

In 1983, the National Commission on Excellence in Education stated, “The educational foundations of our society are presently being eroded by a rising tide of
mediocrity that threatens our very future as a nation and a people.” Test scores and international rankings were down while postsecondary schools and employers were discovering that high school graduates were unprepared and deficient in basic skills (Finn, 2006). The focal point of this crisis was weak academic achievement. Two decades after our nation was categorized as “at risk” academic standards have become more important than ever. It was determined that the best course of action was to outline the skills and knowledge each student should know at each grade level, using this outline to align curriculum and instruction by setting standards to track and assess progress (Klein, 2006). This effort became known as standards-based reform.

The rationale for standards-based reform was to hold schools accountable for student learning. Academic standards not only provide indicators for teaching and learning within the public school system; they also drive policies and further reform. The most important endeavor of educators is student learning or increasing student achievement. Walberg (2001) defines achievement as the knowledge and skills students learn in the usual subjects, primarily those measured by standardized tests. School environment, sports programs, and safety may be of concern for parents and educators but the merit of a school is usually based on how well students learn and the main determinants of students learning are test scores. Standards determine the content and emphasis of tests used to assess and track student achievement and school performance; they influence the content and selection of textbooks; they form the core of teacher education programs; and they provide data for national and international comparison (Klein, 2006; Walberg, 2001).
The United States participates in several international assessments. These assessments are designed to provide comparable performance rankings amongst participating countries. The Organization for Economic Cooperation and Development (OECD) results for 2003 (most recent data available) report poor performance in mathematical proficiency of 15 year olds in the United States. Out of 30 countries who participated in the Program for International Student Assessment (PISA), the average performance for the United States was statistically significantly higher than that of five countries: Portugal, Italy, Greece, Mexico, and Turkey (Ischinger, 2006). Similar findings are reported in a variety of academic subjects (Bushweller, 2005).

NCES assessment results in the area of reading performance show no change in average score on a 0-500 point scale in the United States. Essentially there is a flat trend between 1992 and 2005. National reading results show no change in the percentage of fourth grade students performing at or above basic and the student performing at or above advanced; however there was an increase from 29 to 31% in students performing at or above proficient. The percentage of eighth grade students performing at or above basic was higher in 2005 (73%) than in 1992 (69%), but there was no significant change in the percentage scoring at or above proficient and the students performing at or above advanced. From the data, one can infer that there has been relatively little improvement in reading achievement from 1992-2005.

Reported in 2005, by the National Center for Educational Statistics (NCES) mathematics performance improved nationally. From 1990-2005, average scores increased by 25 points for fourth grade students and 16 points for eighth grade students. This indicates a general trend of increase. Within this trend, there was no significant
change in the percentage of fourth grade students performing at or above basic, but the percentage performing at or above proficient improved, indicating there are more students performing at proficient now than in 1990. Within the same years, the percentage of eighth grade students performing at or above basic was higher in 2005 (73%) than in 1992 (69%), but there was no significant change in the percentage scoring at or above proficient for these same years. Considering the data, it appears students are becoming increasingly proficient in mathematics.

According to the NAEP 2006 report, achievement in American high schools has shown no sign of progress in 30 years. In spite of the accountability movement and other efforts, mathematics and reading scores have remained flat for 17 year olds since 1970. Research shows that high stakes testing increases NAEP cross-sectional performance, but may weaken cohort gain results (Braun, Wang, Jenkins, & Weinbaum, 2006; Carnoy & Siskin, 2003; Rosenshine, 2003). Because the future of the United States is dependent upon the application of increased knowledge and skills in the workplace and the ability of students to adapt such knowledge and skills to meet the rapidly changing conditions of this century, it is essential that schools provide a rigorous curriculum that prepares students for postsecondary education and the workforce (Governor’s Commission on Higher Education & the Economy, 2006; Ohio Legislation S.B. 311 & H.B. 565, 2006). Forty percent of high schools do not offer advanced placement courses. The Governor’s Commission on Higher Education and the Economy (2006) recommends expanded opportunities for students to earn college credit while enrolled in high school and options to improve post-secondary enrollment options. The U.S. ranks ninth in high school graduation with less than half of those graduates adequately prepared for college-level
math and science. By increasing program rigor at the high school level, the expectation is that public school will better prepare student for postsecondary success (Governor’s Commission on Higher Education & the Economy, 2006).

Both the OECD and NAEP provide substantial evidence that the United States has among the largest disparities in achievement among the 32 participating nations (Cocoran & Goertz, 2005). As measured by the NAEP, the achievement gap is wide indeed. To put this in perspective, the average African American or Hispanic 12th grade student scores roughly at the same level as the average White 8th grade student in most core academic subjects (Galston, 2005). Comparable gaps are also seen in SAT scores. Large-scale surveys suggest the achievement gap for both African Americans and Hispanics may be attributable to poverty levels (Jencks & Phillips, 1998; Walberg, 2001).

To reduce performance gaps, the aim of reformers has been redirected from equalizing expenditures toward making certain that children at risk receive an adequate education. Adequacy is defined as the services that result in children meeting academic standards and narrowing achievement gaps (Walberg, 2005). Despite Title I expenditures at the current rate of $8 billion annually, the differences among groups remain large explicitly the gaps among White, African American, and Hispanic students. Poverty level and school district wealth are the factors most strongly associated with student achievement from preschool to college (Summit Education Initiative, 2006).

Roderick and Engel (2001) express, while external goals may improve the performance of many low-performing students, a group of low-performers will remain unaffected and even stand to face considerable sanctions. Furthermore, policies that put all responsibility for success on student performance are likely to fall short of high
proficiency for all. Although there have been significant gains in mathematics achievement, the effectiveness of reform efforts in closing achievement gaps remains unproven. What steps must be taken to provide an adequate education for all?

Educational Reform in the United States

Policy makers in education have long considered reform as the solution to societal ills. Unfortunately, the propensity for education reforms to positively impact society has more than fallen short for it has been plagued with less than successful outcomes. In 1929, Dewey wrote, “All reforms which rest simply upon the enactment of law or the threatening of certain penalties, or upon changes in the mechanical or outward arrangements are transitory and futile” (p. 79). Has this belief heralded true? As we examine types of reform in historical, social, political, and economic contexts we can determine the programs that have positively contributed to common educational practices and the programs that are consequential and ineffectual. We must bear in mind that public schools are institutions of society reacting to each public outcry by bending their focus in response (see Table 1).

Table 1

Educational Reform Timeline

<table>
<thead>
<tr>
<th>Historical Event</th>
<th>Reform</th>
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<tbody>
<tr>
<td>Reduce crime &amp; violence by promoting character</td>
<td>1820s Establishment of the American State School</td>
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<tr>
<td>development &amp; a democratic society.</td>
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<tr>
<td>War on Poverty</td>
<td>1890s Horace Mann asserts that public schools can prevent poverty.</td>
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</tbody>
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26
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<thead>
<tr>
<th>Historical Event</th>
<th>Reform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigration</td>
<td>Restructuring of schools in an effort to make good, loyal Americans out of the children of immigrants.</td>
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<tr>
<td>1954 Brown vs. Board of Education rules racial segregation unconstitutional.</td>
<td>Desegregation</td>
</tr>
<tr>
<td>1957 Soviet Union launches Sputnik satellite.</td>
<td>The National Defense Education Act was passed. Schools underwent a reexamination of math and science instruction.</td>
</tr>
<tr>
<td>War on Poverty</td>
<td>1965 Elementary &amp; Secondary Education Act (ESEA) offered numerous programs supporting school choice such as; Voluntary Public School Choice Program, Unsafe School Choice Option, the Magnet Schools Program, &amp;Title I (earmarking millions for disadvantaged schools).</td>
</tr>
<tr>
<td>National Student Rankings indicate other economically advanced countries were exceeding America’s level of educational achievement</td>
<td>1970 Leon Lessinger wrote <em>Every Kid a Winner</em> regarded as the authority of accountability.</td>
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<tr>
<td>1983 <em>A Nation at Risk</em> is released outlining serious deficiencies in American schools.</td>
<td>1980 U.S. Department of Education is created whose mission is to guarantee equal access &amp; promote educational excellence.</td>
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<td></td>
<td>1989 President George Bush &amp; governors stipulate new national academic goals with demonstrated competency in English, mathematics, science, history &amp; geography.</td>
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<td></td>
<td>1990 National Education Goals Panel is established to assess and report on state &amp; national progress towards achieving national goals by 2000.</td>
</tr>
<tr>
<td>Historical Event</td>
<td>Reform</td>
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<td>-----------------------------------------------------</td>
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<tr>
<td>Mid-1990s Comprehensive School Reform Models; models were based on scientifically validated practices, &amp; sponsoring organizations received funding to develop &amp; implement them.</td>
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<tr>
<td>1991 First charter school act is passed in Minnesota.</td>
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<tr>
<td>1994 School-To-Work Opportunities Act <em>a Presidential Initiative</em> that supported educational school to work &amp; career educational programs.</td>
<td></td>
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<tr>
<td>1996 Education Summit calls for new world-class standards for U.S. schools.</td>
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<tr>
<td>1997 Comprehensive School Reform Program awards funding to schools in need of improvement.</td>
<td></td>
</tr>
<tr>
<td>2002 <em>No Child Left Behinds Act, a Presidential Initiative</em>, calls for greater accountability.</td>
<td></td>
</tr>
<tr>
<td>2002 National Education Goals Panel is closed after reporting goals were not attained.</td>
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The stimulus for the creation of the public school, free and open to all, was the perpetuation of a free democracy and the advancement of public welfare (Altenbaugh, 2003; Cubberly, 1920; Kaestle, 1983). It was believed that public schools were the solution to the problems of diversity, instability, and equal opportunity and would produce loyal Americans, ensure moral training and promote social stability (Kaestle,
The transformation from the one room schoolhouse into a system that assumed greater responsibilities was brought about by the large numbers of immigrants in the first half of the twentieth century (Altenbaugh, 2003). Schools were the answer to the flood of people who did not speak, read, or write English. Oftentimes, the public school finds itself as the answer to social change.

There have been two major changes in society that have contributed to the ineffectiveness of modern day schools; the first is the breakdown of functional communities. In place of family, home, and church raising a child, school has become the most important factor in a child’s life (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1991; Rotberg, 2005). The second change in society is the repositioning of values. Social capital consists of the norms, the social networks, and the relationships between adults and children that contribute to the child’s development (Putnam, 1993, 1995). From the conception of public schools, it has been the school mission to teach the morals and values of American society (Bennett, 1999; Vryhof, 2004). It has been argued that schools should develop students’ intellect and moral conscience, with virtue and morality being the prime objective of many educational settings. The concentration on moral character shifted and history changed in 1957, when the Soviet Union successfully launched Sputnik I.

The launch marked the start of the space age and the U.S. - U.S.S.R. space race. As a technical achievement, Sputnik caught the American public off guard and became the catalyst for new political, military, technological, and scientific developments. The National Defense Education Act was passed in an effort to help the U.S. catch up with the Soviets in the post-Sputnik Era as funds were poured into science and math programs.
across the nation (Altenbaugh, 2003). This was the first time Americans looked at education to address societal inadequacy for it was feared that the United States would not be able to compete economically with other nations. More than 20 years later those fears were substantiated when the report *A Nation at Risk* (1983) observed more than a decade of declining SAT scores. It was reported that other countries were surpassing America’s height of educational attainment and as a result; these countries were surmounting America’s competitive edge (Hirsch, 2001). Chubb (2001) suggested that improvements be made and children prepared to compete in a world of international commerce and technological progress.

Reforms in the 20th century continued to abound in public education as schools played a central role in the war on poverty. Research has shown that minority students attending integrated schools are more likely to attend and succeed in college (Battistich & Solomon, 1996). Segregated minority schools where there is little or no interracial exposure have been highly correlated to areas of concentrated poverty (Sadler, 2005). Americans, who were polled, showed overwhelming support for the integration of schools, believing integration improved the quality of education for all students. The Elementary and Secondary Education Act of 1965 (ESEA), a Federal law largely defined by Title I, focused on lessening the disparities in academic performance between poor and wealthy school by promoting equitable academic achievement (Stullich, McCravy, & Roney, 2006). Initially federal funds were used by states to equalize school funding and ensure equal treatment but as time went by with little change and growing concern about international competition, this focus evolved into a standards-based accountability system with the objective of equality of outcomes for all groups of students (Bowe et al., 2005).
Another trend in educational reform is school choice. Through market competition, underperforming schools are forced to compete for students thereby increasing the performance of all schools (Ryan & Hornbeck, 2004; Smole, 2006b). This type of reform is most commonly associated with charter schools and voucher programs. Other reforms include year-round education, differentiated staffing, minimum competencies, self-paced instruction, competency-based teacher education, management objectives, school-to-work, accountability, and high stakes testing (Hunt, 2005).

Two presidential education initiatives have preceded the current efforts of NCLB. The first was Goals 2000: Educate America Act of 1994. Goals 2000 established a framework in which to identify world-class academic standards, to measure student progress, and to provide the support that students may need to meet the standards (Carr, 2001). By 2000, the goals were for all children starting school to be ready to learn, to increase high school graduation rates to 90%, for students in grades 4, 8, and 12 to demonstrate competency in specified subject areas, for all students to be ready to enter the workforce, for students to rank first in the world in math and science, for every school to be free of drugs, and for teachers to have access to professional development. The National Education Goals Report demonstrated modest improvements in several goals, which included more children born with a healthier start in life, more families reading and telling stories to their children, improved math scores for students in fourth and eighth grades, and more degrees earned in math and science. In other areas, the nation regressed; 12th grade reading achievement declined, fewer secondary school teachers held degrees in their subject areas, the gap in college completion rates between White and
Hispanic students widened and school violence increased. Other areas showed no change.

In 1994 legislature passed a second presidential initiative, the School-to-Work Opportunities Act (STW). This law required states to coordinate school-to-work plans with the educational reforms they were already planning with Goals 2000. Both acts involved a restructuring, rescheduling, and rethinking of educational practices, in other words a systemic change within education. The failure of STW can be linked to the deficiency in understanding the process of implementing curriculum change or change in traditional subject areas. Suggested improvements were to develop a concentrated effort to influence pre-service teacher education programs within the higher education structure, a definitive body of knowledge, a scope and sequence for the new material, professional development models, an administration involvement plan, and an evaluation plan using subjective normative testing. According to Carr (2001), “Future federal educational efforts should be able to improve from the STW shortfalls and create a more effective design and implementation methodology” (p. 36).

Through the exploration of the changing and increasingly multifaceted educational reform movements in the public school system, we can examine information about our current allegedly insurmountable educational problems. It has been suggested that educational reform should be developed from programs that provide information and statistics so that knowledgeable decisions can be made (Kruse, forthcoming). What works and what does not? What has led up to this point? Progress and reform too often carry the connotation of positive change and history is often portrayed as a long, steady, march toward some preexisting ideal. Nevertheless, this is not necessarily the case as
time and again change represents progress for some and a setback for others. As expressed by DeFiore (2001), schools are not an effective means to societal change.

No Child Left Behind

The No Child Left Behind Act (NCLB) of 2001 represents a restructuring and redirection of federal effort to support elementary and secondary education. The focus of this reform is to improve student achievement and guarantee that all children receive a high-quality education. NCLB is based on four principles: the law provides an accountability system that identifies underperforming schools; the law increases the opportunities for students who are in schools that are deficient in the subject areas of math and reading; the law increases the capacity for students to become proficient; and the law attempts to reduce achievement gaps among subgroups of the population (Bowe et al., 2005).

Under NCLB, considerable weight is given to school accountability; every state must set clear and high standards for what students should know in each grade in the core subjects of reading, math, and science. Schools are required to adopt state standards; align curriculums and instruction with standards, and achieve adequate yearly progress. Many educators advocate an approach that designates a specific and well-crafted curriculum, one that utilizes sound tests to be used diagnostically in determining the extent the curriculum has been taught and learned (Hirsch, 2001; Ravitch, 2001; Walberg, 2001). Amrein and Berliner (2002) determined that students in states with high-stakes policies fared no better on SAT, ACT, and AP examinations than those in low-stakes states. They found a similar pattern with NAEP results and concluded that performance on state tests failed to generalize to other instruments. While the federal
government cannot dictate the content of a state assessment, it can judge whether assessments have been aligned with state standards and awards the final approval for each state’s plan (Cocoran & Goertz, 2005).

NCLB put in place a system of testing to validate school effectiveness and to hold schools and districts accountable for student learning. By the 2005-06 school year, states were required to test all students in grades three through eight and high school students at least once in reading and math using assessments aligned with state standards; the following year began testing students once per grade in science. NCLB set an explicit goal of attaining 100% of students meeting standards by 2014 (U.S. Department of Education, 2005a). To prepare for this benchmark date, states have established annual goals and objectives for student performance so that the target of 100% proficient can be accomplished. Accountability and high standards are viewed as a way of ensuring that all children, especially disadvantaged children and children of color, get access to quality education.

Narrowing the achievement gap between white and minority students is another key feature of NCLB. Students who fall short of target rates are typically from minority racial and ethnic groups, have disabilities, or are limited in English proficiency (Kim & Sunderman, 2004; U.S. Department of Education, n.d.e, 2005a). Using a federally required set of measures, states and school districts must report on the progress of specific subgroups of students. Student assessment, data collection, and analysis will provide information on the effectiveness of NCLB in closing the achievement gap. Schools and districts receiving Title I funds that fail to meet AYP for their students or any subgroup are subject to an increasingly disciplinary set of sanctions. Hanushek and
Raymond (2004) warn states that attach consequences to their accountability systems demonstrate greater success than states that only report results. Initially parents are given the right to choose another school in which to enroll their child or participation in Supplemental Education Services and then progressing to state take-over and potentially school closure. SES services shift the focus from school improvement to individual student achievement; it is unclear how this strategy will improve poorly performing schools (Kim & Sunderman, 2004).

**Supplemental Educational Services**

Public school choice and Supplemental Educational Services (SES), both provisions of NCLB, are intended as corrective actions for school identified as needing improvement. NCLB amended ESEA (as previously noted ESEA was instituted in an effort to fight poverty by earmarking funds for programs designed to assist disadvantaged children) to authorize SES as a means of school improvement. SES are educational activities provided outside normal school hours designed to enhance the educational services that are provided during a regularly scheduled school day for the purpose of increasing the academic achievement of students in low-performing schools (Kim & Sunderman, 2004; Smole, 2006a). Since 2003, the SES school option has afforded students in failing school access to tutors where they can get assistance in reading and math in an effort to raise achievement levels.

Local educational agencies (LEAs) are required to provide students from low-income families who attend schools identified for school improvement, corrective action, or restructuring the opportunity to receive SES from a state-approved provider (Kruse et al., 2005, 2006; Kruse et al., 2004; Smole, 2006a). Independent tutoring services as well
as local schools and districts may become eligible to become an SES provider by receiving approval from their state department of education. Parents of eligible students are notified by their child’s school and may select from a list of qualified providers within the jurisdiction of the LEA where their children attend. In circumstances where only a limited number of students can be provided with services (possibly due to funding constraints), priority is given to the lowest achieving and eligible students. Only recently was the SES provision of NCLB implemented because schools needed to be in their second year of academic improvement. As with any new program, monitoring and evaluation, data collection and analysis are vital to the overall success of SES. Fortunately for SES providers, forerunners in SES implementation have identified “best practices”.

Best Practices

Based on an extensive nationwide investigation of current literature regarding best SES practices, several key elements were identified. There are six components that include active leadership roles, district/provider relationship, quality communication and outreach, clear goals and accountability, research-based programs that are aligned with standards and programs designed to address cultural and linguistic differences. Incorporating best practices serves to promote successful SES programs.

Leadership

The role of leadership is essential. Leaders must establish a plan that recognizes that educational intervention requires steady and long-term investment before it will produce stable results (Anderson & Laguarda, 2005; Corwin & Wilhelm, 2006, U.S. Department of Education, 2005e, 2005e). To attain optimal benefits, services should
begin in early fall and continue until the end of the school year (Corwin & Wilhelm, 2006). Leaders should encourage teachers and staff to take ownership and secure their commitment in assisting with the program (Anderson & Laguarda, 2005). An exemplary program, Toledo anticipated an 80% turnout for their fall parent-teacher conferences. They used this as an opportunity for outreach to parents of eligible SES students. During a staff meeting, the principal working along with his or her teachers developed a plan that included staff preparation of information packets. These packets contained a letter, provider description brochure, and application. At the open house, it was the classroom teachers who openly encouraged parents to participate (U.S. Department of Education, 2005e). This approach was highly successful in introducing the program to the community and encouraged families to enroll their children (Fletcher, 2005).

Staffing

A significant advantage to offering SES within school district is being able to hire tutors from the teaching staff. Using teachers that originate within the school district facilitates a better network with parents and teachers (Anderson & Laguarda, 2005; McElroy, 2005; U.S. Department of Education, 2005e). An illustration of this practice can be seen in Toledo where tutors were certified teachers that were currently employed by the school district (U.S. Department of Education, 2005e). By staffing SES strategically within the organizational structure of the district and with individuals who could focus time and attention on the program, they were able to deliver a better program to students (Kruse et al., 2005).
Training and Professional Development

The single most positive factor is training and professional development (Fletcher, 2005; McElroy, 2005). Modeling this practice, one program offered a series of four training sessions for tutors that were held before the tutoring sessions began. Each tutor received 12 hours of training in research-based reading or math tutoring strategies prior to tutoring students. In addition, a reading or math specialist was on hand to coach each tutor throughout the scheduled tutoring cycle (Kruse et al., 2005).

Relationships and Communication

Another area that avails itself to program effectiveness is the relationship between school and/or school district and provider. Schools and districts should locate experienced providers within their jurisdiction that offer a demonstrated record of effectiveness in increasing the academic proficiency of students in reading and math (Anderson & Laguarda, 2005; Corwin & Wilhelm, 2006; U.S. Department of Education, 2005e). Classroom teachers work daily with students and possess knowledge of students’ strengths and weaknesses as well as learning styles. The tutor’s purpose is to complement and reinforce the teacher, while parents provide the motivation and opportunities for students to demonstrate new skills (Anderson & Laguarda, 2005; Cohen, 2003; U.S. Department of Education, 2005e, 2004b). Communicating directly with providers and coordinating efforts ensures that services will run smoothly. In addition to classroom teachers, parents should follow and communicate progress to classroom teachers.

NCLB requires district administrators to collect data on provider performance and assist the state in monitoring in order to secure compliance with contract terms (U.S. Department of Education, 2005a, 2005b, 2005c).
Department of Education, 2005e, 2004b). Schools should use contracts that set clear expectations. Contracts should be specific and comprehensive including performance targets, such as “in reading 90% of students served must show progress on an Individual Reading Inventory administered by student’s school” (Anderson & Laguarda, 2005, p. 12).

In an effort to maximize participation, schools must communicate parental options clearly. Parents need clear-cut information concerning services, procedures, and timelines in order for parents to select the provider most suitable for their child’s needs. For example, Los Angeles (U.S. Department of Education, 2004b) created a standardized template for each provider to fill out that included grade levels served, staff qualifications, and past performance. The results were compiled in a brochure and mailed to parents in both Spanish and English as well as posted on the school’s website. A variety of providers increases parents’ prospect of locating the best possible fit for their child.

Notifying parents by mail has proven to be insufficient (Kruse & Liang, 2006). Schools should establish a marketing strategy that grabs parents’ attention and motivates them to take action while informing them about SES options. English is a second language for many SES parents; therefore assisting parents in accessing options is necessary. An exemplary program is Los Angeles, whose administrators executed an information campaign to get parents’ attention that included a staff prepared booklet and SES supply boxes for each school. Boxes contained booklets and flyers in different languages. Schools became information centers as principals and teachers carried the

Strengthening parent advisory groups, partnerships, and parent-to-parent communication is another effective method of informing stakeholders and increasing participation. Schools must strive to enroll as many students as possible by identifying barriers to participation. Enrolling children in the program should be effortless and convenient for parents. Extending enrollment periods may provide sufficient time for parents to make the best choice. Non-English speaking parents present limitations to successfully communicating program options. These limitations must be addressed strategically and systematically so that parents receive and understand SES information. To remedy this problem, Forsyth School (U.S. Department of Education, 2004b) created a transition center coordinated by bilingual staff that provided parents with assistance. This center worked to breakdown language and cultural barriers, thereby increasing enrollment (Chicago Public Schools Office of Research, Evaluation & Accountability, 2005).

Regular communication regarding student progress supports program outcomes. An example of establishing a means of teacher-to-parent-to-tutor communication related to student progress is to provide parents with progress reports or at home tips to implement themselves (Cohen, 2003). In Los Angeles they require providers to send progress reports to parents and classroom teachers for every 15 hours of service. While at Forsyth School, their contract stipulates that providers supply parents and teachers results of pre- and post-tests and biweekly reports (U.S. Department of Education, 2005e). The foundation for all SES programs should be proven methods of instruction
that positively affect student learning. No two students learn the same way. Providers should create differentiated programs that begin with diagnostic assessment that clearly identifies specific learning gaps, how best to engage students, and aligned with state standards and district learning objectives (Anderson & Laguarda, 2005; U.S. Department of Education, 2004b).

Data Collection and Decision-Making

Data-driven decision-making is another key element in long-term strategic planning. A systematic and ongoing method of monitoring skills and achievement against learning objectives is necessary. This system will help in assessing SES programs. Learning plan forms should be detailed and specific. An example of a quality system-wide data collection is where student-learning plans involve parents, classroom teachers and tutors working together to identify achievement goals, services students will receive, and assessment tools used to track progress. Assessment results can be analyzed and modifications can be made that will serve to improve program goals (U.S. Department of Education, 2004b). Program effectiveness can be documented with comparable assessment of student academic achievement with baseline and exit data (pre-test and post-test model) (Kruse et al., 2005, 2006; Kruse et al., 2004). Modeling this in San Diego and Rochester (U.S. Department of Education, 2004b) student achievement data systems were customized to include information from each learning plan used to guide academic intervention (U.S. Department of Education, 2004b).

Student attendance at after-school tutoring can be challenging especially for the middle school and must be monitored. Toledo demonstrates a successful attendance policy; when a student does not attend a tutoring session the classroom teacher, tutor, and
principal contact the parents (U.S. Department of Education, 2004b). Providers have successfully implemented data collection methods.

Nineteen states have reported an increase of more than 50% in English language learners over the past 3 years. These students require tailored instruction in skills to observe, think about, manipulate, and experience sounds in spoken language. Instructional programs need more emphasis on effective pedagogy and instructional strategies that are culturally appropriate for diverse populations. Efforts made to shape quality SES programs that encompass these six components will have a more solid footing in which to develop their programs.

Considerations of NCLB Policies

Prior to NCLB, public school accountability had been a state and local responsibility with the federal government and national organizations playing a supportive role. In the history of education reform, there is no federal law that exceeds the nationalization of education policy such as NCLB (Elmore, 2004). The federal government’s role has become highly involved in the daily operation of public education by instituting a federal law that imposes a single accountability system determined suitable for all schools while setting national parameters on state and local accountability systems (Bowe et al., 2005; Cocoran & Goertz, 2005; Elmore, 2004), thereby limiting the exploration and variation of accountability policies and practices, consequently narrowing the potential findings and programs that may have demonstrated higher success (Cocoran & Goertz, 2005). In the effort to establish accountability, schools have drastically narrowed their scope becoming intently focused on teaching reading and math- consequently the curriculum has suffered (Fletcher, 2005). The system is
unresponsive to systemic problems and views the problems of low-performing schools as essentially the same (Elmore, 2004).

Fiscal considerations may discourage districts from promoting NCLB’s choice options. The more students pursue their options, the more districts will have to devote the mandatory 20% Title I budget “set-aside” to SES rather than to programs that are already in existence with the likelihood that even 20% will not be adequate to cover the cost (Finn & Hess, 2004). Elmore’s (2004) research on accountability discovered a lack of internal accountability in failing schools meaning they lack an understanding of expectations for student learning and the means to influence instructional practice within the classroom. Schools with high internal accountability demonstrated clear expectations for instructional practice and student learning; leading to gains in student outcomes. Does this imply that NCLB has not provided schools with adequate support to develop comprehensive and coherent internal foci on student learning? Have the policies of NCLB provided clear guidance, an effective system of choices, or the information needed to make constructive decisions?

NCLB finds itself fraught with issues such as the use of tests to quantify student, school, and district performance and the long-term effects of high-stakes testing (Carnoy, Elmore, & Siskin, 2003; Davis, 2006). Most schools conduct student assessments near the end of the school year, measuring what the students learned throughout the course of the year. This creates a conundrum in that states testing late in spring have difficulty identifying failing schools early enough to implement the SES option. Administrators and staff are not in place to implement SES or to handle additional programming. Schools may need a longer timeframe; it has been suggested a one-year lag with the
sanction being placed on schools in their first year of school improvement status may be beneficial (Finn & Hess, 2004). Under NCLB SES requirements are new and have no precedent in prior federal legislation they are not optional or at the discretion of district officials. By directing resources to outside service providers, SES provisions weaken the organizational capacity of schools to develop coherent instructional practice and reverses earlier attempts to provide additional resources to needy schools (Kim & Sunderman, 2004).

Will the steps taken by the federal and state governments to set standards and hold schools more accountable for making improvements in performance prove effective? As more information on the performance and effectiveness of school choice programs becomes available and is reviewed by policymakers, attention may be turned toward examining whether the existing forms of school choice programs is optimal and if not, whether existing programs should be consolidated or eliminated, or new programs created (Smole, 2006). As with the renovation of any structure, organization or policy funding is always an issue.

Research Studies

A review of the literature shows that there have been very few studies that have investigated the effects of NCLB on student learning outcomes. Due to the paucity of research in this area, each study shall be discussed in some detail.

**NCLB and Student Learning Outcomes**

One study (Bowe et al., 2005) used the Growth Research Database form the Northwest Evaluation Association to compare student achievement and student growth on a common and reliable scale. The participants included hundreds of thousands of
students in school districts across the country. This was the first year in a series of studies that investigated the impact of NCLB. The purpose of the study was to provide an initial view of the law and to identify trends. Findings from the studies indicated that state level tests tend to improve observed achievement and there is evidence that NCLB has improved student achievement since its adoption, although the effect is smaller than the testing effect. While NCLB has shown positive effects on student achievement and growth, there are two concerns raised by this study. The first is that at the current rate of change schools will not be close to reaching the requirement of 100% proficiency by 2014. The second is that students in ethnic groups that have demonstrated achievement gaps in the past have had less growth under NCLB and demonstrate less growth in comparison to European-American students with the same baseline score. This study was limited because NCLB was in its initial stages and it may have been too early in program implementation to identify the extent to which NCLB will influence educational change in the future.

Contrary to these findings, Secretary Spellings (U.S. Department of Education, n.d.b) confirms that NCLB has had the intended positive effect on students. The NAEP also known as the Nation’s Report Card (U.S. Department of Education, 2005b) releases a long-term trend assessment every 5 years and a state-by-state assessment every 2 years. The data include national and state scores for 338,000 fourth grade students and 321,000 eighth grade students tested in reading, mathematics, and other subjects. The latest Nation’s Report Card (2006a) shows steady growth and gains by students particularly among younger and minority students; overall fourth grade and eighth grade math scores increased as well as fourth grade reading scores. African-American and Hispanic fourth
Graders reached the highest reading and math scores for their groups than in any previous year, and African-Americans and Hispanic eighth graders reached the highest math scores for their groups than in any previous year. In both fourth and eighth grades, a higher percentage of white, African-American, Hispanic and Asian/Pacific Islander students performed at or above proficient those in previous years. Although improvement has been measured, the results suggest more intervention is needed with middle and high school students.

**SES and Student Learning Outcomes**

While NCLB has garnered vast interest and many articles, there has been very little written about the SES portion of the initiative. Basically there are two areas of study pertaining to SES. The first area investigates SES implementation and the second area looks at student achievement gains. One study presented key findings over a period of 3 years (David et al., 2006). Data collection was from a variety of sources including a yearly survey of 1,300 district Title I administrators, a yearly survey of 739 principals, yearly case study visits to 20 schools identified for improvement and interviews of all Title I administrators and analyses of state accountability system components. All data reflected a sample representative of Title I schools identified for improvement in 2001-02 spanning over 15 districts in five states. The first year of NCLB implementation 2001-02, demonstrated progress in implementing accountability system under NCLB but that gap remained between existing systems and the NCLB vision, the vision in which all school achieve high standards. From the study emerged five themes:

1. Small district schools were more likely to exit improvement status than large districts.
2. Participation in school choice remained at 1% and participation in SES increased from 7 to 19%.
3. An increased number of states provided technical assistance to schools in improvement status.
4. Strategies for school improvement remained similar across the 3 years nationally.
5. School poverty and district size were higher predictors of exiting improvement status than improvement strategies.

The biggest challenges districts faced in implementing SES included the lack of available providers (especially in small, rural districts), communication with parents, and assessing provider performance. In both 2002-03 and 2003-04, half of the districts required to offer SES complied. The increase in the number of eligible and participating students was substantial especially in urban and very large districts that average 9,000 to 16,000 eligible students. SES providers were primarily non-faith-based and non-online providers.

Another study (Anderson & Laguarda, 2005) presents findings from case studies conducted during 2003-04 school year and followed baseline data that were collected in the previous year. The study also conducted interviews in a purposive sample of six states and nine school districts, which were selected because they appeared to be relatively advanced in the process. A major limitation of this study was the small sample size, which was not nationally representative. Findings indicate that after 2 years, states, districts, schools, and providers were overcoming some of the initial trials of SES implementation. A noted area of improvement was establishing routines for reviewing applications and getting a list of providers out to districts sooner. District administrators continued to confront additional administrative responsibilities and were in the process of developing systems that would streamline operations. Other challenges included
moderate increases in participation, evaluating provider performance, improving communication with parents, managing administrative costs, and payment to providers when student attendance is irregular.

A study by Kim and Sunderman (2004) used 11 urban districts from a geographically, politically, and demographically diverse sample to provide a wide range of local contexts in which to examine the ability of districts to implement SES. The results of the study confirmed that SES was not widely used during the first year. The demand for services was low, primarily due to the inconvenience of services being offered outside of regular school hours and away from eligible students’ neighborhoods. The first year also documented tremendous administrative burdens faced by districts with no increased funding. Moreover, there is growing concern of the potential for SES to fragment Title I seriously disrupting other school reform efforts by diverting resources away from the neediest students.

Another study conducted by Chicago Public School- Office of Research, Evaluation and Accountability (2005) *NCLB Tutoring Program Evaluation* compared baseline achievement levels of students who participated in the program with eligible students who did not participate. The students with tutoring increased the percentage at national norms from 2004-05 while those students without tutoring had slightly fewer students at national norms in 2005 compared to 2004. In addition to measuring student gains, gains between providers were examined. Students from one specific provider were shown to outperform students from other providers. Few researchers have examined the impact of SES on student achievement and school performance. There is no body of
research that provides conclusive evidence documenting the effect of SES on learning outcomes for low-income and minority students.

Overall Summary

In summary, the demand for SES is increasing as more schools fail to meet adequate yearly progress. Through the reallocation of Title I funding these services are being provided to children enrolled in low-performing schools characterized as primarily very large urban elementary schools. The quality of these programs can be increased by adhering to “Best Practices” as suggested by the U.S. Department of Education (2005e, 2004b, 2002, n.d.a). This research was critical to the mission of SES program evaluation, improvement of the public education system, and program implementation.
CHAPTER III
METHODOLOGY

This study was designed to examine and measure the impact of SES on student learning and achievement outcomes and to identify areas of strength and weakness in program implementation. This chapter presented a description of the participants and sampling procedures. Next, the derivation of the General Research Hypothesis followed by the Specific Research Hypotheses were discussed. The reader was presented with a detailed description of research design, including data collection and analysis, statistical methods and limitations. This provided a comprehensive picture of the research design and process.

Participants

It was important to understand the demographics of the state used in this study. This study took place in two public school districts located in the State of Ohio. Because SES is a nationwide initiative, population in the state is approximately 11,353,140 (U.S. Census Bureau, 2000), the unemployment rate averaged 5.8 (Bureau of Labor & Statistics, 2005), and the percentage of African American and Hispanic populations are 11.5 and 2.5, respectively. The state is divided into 88 counties with 611 public school districts (Ohio School Boards Association, 2006). The breakdown of school districts by
typography is 95 rural/agricultural-high poverty, low median income; 160 rural/agricultural-small student population, low poverty, low to moderate median income; 80 rural/small town-moderate to high median income; 101 urban-low median income, high poverty; 14-major urban-very high poverty; 106 urban/suburban-high median income; and 45 urban/suburban-very high median income, very low poverty. The districts used in this study are categorized as major urban, very high poverty districts (Ohio Department of Education, 2006).

The number of schools in improvement status has changed since the start up of NCLB. As shown in Figure 1, in Ohio during school year 2001-02 290 public schools were in improvement status, and that number has steadily decreased to 124 public schools in 2006-07. This indicates the state of Ohio has experienced a 43% decrease in schools determined in need of improvement over the past 6 years or since the initiation of NCLB.

Figure 1. Ohio public schools in improvement status from 2001-02 to 2006-07.
Sample

The participants in this study were not randomly selected nor randomly assigned. Because the investigator had been hired by The University of Akron Evaluation Team as a research assistant, the sample was one of convenience. The evaluation project was ongoing and data were collected over a 3-year period. These data were made available to the investigator for research purposes. Due to the eligibility requirements for SES participation, demographics were not investigated. It is understood that individual SES samples have been determined to be similar to SES populations nationwide (U.S. Department of Education, 2005e). Sufficient research and conclusive statistical evidence indicating SES populations are similar demographically in composition (U.S. Department of Education, 2005e). Students are eligible, whether or not they perform below the established level of proficiency, poorly on an assessment, or are part of a particular subgroup who attend Title I schools that have not met AYP for two consecutive years (Corwin & Wilhelm, 2006). National studies have characterized SES students as coming from low-income families, high poverty schools, and within the lower rankings for statewide assessments (U.S. Department of Education, 2005e, 2004b).

In this study, data were not collected for all participants and were collected ex post facto; thus, the available data for this study fluctuated as indicated in Table 2. The data were collected over a 3-year period, and while the sample was comprised of only SES students within two public school districts enrolled in district SES programs, the sample was not a true cohort because the students did not remain the same.
Table 2
Sample by Data Collection

<table>
<thead>
<tr>
<th>SY</th>
<th>Provider</th>
<th>Reading scores</th>
<th>Math scores</th>
<th>Parent surveys</th>
<th>Teacher surveys</th>
<th>Parent interviews</th>
<th>Teacher interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>Jefferson School District</td>
<td>17</td>
<td>N/A</td>
<td>N/A</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Franklin School District</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>2005-06</td>
<td>Jefferson School District</td>
<td>46</td>
<td>N/A</td>
<td>9</td>
<td>1</td>
<td>34</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Franklin School District</td>
<td>20</td>
<td>17</td>
<td>10</td>
<td>1</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>2006-07</td>
<td>Jefferson School District</td>
<td>312</td>
<td>119</td>
<td>42</td>
<td>N/A</td>
<td>89</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Franklin School District</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note. N/A indicates data were not available.

SES programs used in this study were implemented by school district personnel. Instructional plans were aligned with Ohio’s Content Standards for reading and mathematics. The participants for the 2004-05 school year included: 17 reading students, 2 teachers, and 3 parents from Jefferson School District and 2 teachers, 4 parents from Franklin School District. The participants for the 2005-06 school year includes: 46 reading students, 43 parents, and 3 teachers from Jefferson School District and 19 reading students, 17 math students, 17 parents, and 7 teachers from Franklin School District. Finally, the participants for the 2006-07 school year included: 312 reading students, 119 math students, 131 parents, and 2 teachers from Jefferson School District.
Derivation of the General and Specific Hypotheses

The focus of this study was to investigate the effects of SES on student learning and achievement outcomes and to identify areas of strength and weakness in program implementation, despite the lack of previous research regarding this topic. This information can be used to enhance increased student achievement and learning outcomes. Based on a review of the literature which included a review of “best practices” for SES implementation and assistance from experts in the field, the hypotheses for this study were defined.

General Hypotheses

The information on SES provider practices and effects on student outcomes is negligible. The following General Hypotheses were derived to be tested.

*General Hypothesis 1 (GH1)*

Student achievement will be positively related to student participation in Supplemental Educational Services.

Specific Hypothesis 1.1. There is a statistically significant relationship between student participation in Supplemental Educational Services and increased achievement.

Specific Hypothesis 1.2. There is a statistically significant relationship between student participation in Supplemental Educational Services and students’ increased reading achievement.

*General Hypothesis 2 (GH2)*

There is a statistically significant relationship between the standards, included in the parent survey, in predicting student learning gains in reading and mathematics.
Specific Hypothesis 2.1. There is a statistically significant relationship between the standards, included in the parent survey, in predicting student learning gains in reading.

Specific Hypothesis 2.2. There is a statistically significant relationship between the standards, included in the parent survey, in predicting student learning gains in mathematics.

Research Design

This study used a multiple methods approach, putting into practice an interactive continuum of both quantitative and qualitative methods of research. A multiple methods approach is one where the inductive process of qualitative research informs the hypotheses for the deductive, quantitative investigation (Newman & Benz, 1998). This study began the continuum with the quantitative research determining the effects of SES on student learning outcomes and concludes with the qualitative research supporting the quantitative findings. The quantitative data were coded and analyzed according to the hypotheses, with conclusions being drawn that either confirmed or conflicted with speculated findings. The qualitative data were analyzed according to the hypotheses and used to triangulate the quantitative findings.

A variety of data sources were used to triangulate the data. The effectiveness of SES was determined by interviewing parents and teachers, surveying parents and teachers, observing SES sessions, and analyzing student learning gains in reading and math. Research is more relevant when it goes beyond simply reporting quantitative findings then looks for consistencies in perceptions that support those findings (Newman & Benz, 1998; Thomas, 2003). The intent of this investigator was to look for
consistencies in parent and teacher perceptions as they related to student learning outcomes. By using between methods triangulation- learning gains, interviews, surveys, and observations to examine the SES outcomes, this investigator cross-validated the findings of the study and tested the degree of external validity.

The data were collected ex post facto. According to Kerlinger (1973), in ex post facto research the researcher does not have complete control over independent variables because their manifestations have already happened. Conclusions and implications on variable relationships and/or differences are made without intervention by the researcher. The independent variables in this study included learning gains, in both reading and mathematics, which were not manipulatable because services have already been rendered. The limitation of ex post facto design is low internal validity. Although one may not infer causation in ex post facto design, the tests of relationships can result in important discovery.

There are three types of ex post facto research design. Type one, also known as exploratory, does not use hypotheses and has the potential to be misleading due to the fact it lacks internal validity.

Type two does use hypotheses and is considered a better design than type one. Researchers who employ both type one and type two must be cautious in interpreting their results.

The third type of ex post facto research design includes both stated hypotheses and alternative hypotheses. The alternative hypotheses suggest additional explanations for the observed effects other than the stated explanation being tested. These explanations are alternative hypotheses to the ones the research is attempting to confirm.
This study followed the third type where the hypotheses control for alternative explanations providing the opportunity for alternative explanations for the effects other than what is being stated. The researcher employed the ex post facto design after a thorough examination of the literature and available data. Therefore, the research hypotheses were derived by logical and empirical data.

Instruments

Several instruments were used in this study. The reading and mathematics assessment scores originated with SES providers at Jefferson School District and Franklin School District, while parent and teacher surveys were developed and implemented on behalf of the Ohio Department of Education (ODE) SES Evaluation Project. This researcher obtained the reading and mathematics scores from the SES evaluators. For the 2003-04 assessments, Jefferson School District providers used the Upson Reading Practice Proficiency Test to assess third grade students (scores were available for 11 students) and the Ohio State Reading Achievement Test for fourth grade students (scores were available for six students). For the 2005-06 assessments, Franklin School District providers made available pre- and post-test scores for reading and math; the testing source was not disclosed. Jefferson providers supplied student records on pre- and post-diagnostic tests in reading and math for 2006-07. Their available data for reading include 312 in reading achievement scores and 119 available for math achievement scores. The testing source was not disclosed. The reliability and validity indexes were not made available for the pre- and post-test reading and mathematics assessments. The other instruments used in the study included the parent and teacher surveys, parent and teacher interviews, and observations.
**Parent Survey**

The parent survey was developed by the SES evaluators for use in the ODE SES Evaluation Project. Great effort went into the development of the survey. Not only were the evaluators experts in the field of education and research, they also investigated the purpose and goals of SES and aligned the survey questions with ODE performance indicators for SES providers. The effectiveness report was the tool used by ODE to document and rate the effectiveness of SES providers. It included three standards which are:

1. Student Achievement  
2. Communication  
3. Provider/Requirements/Assurances.

(A copy of the SES Effectiveness Report can be found in Appendix E.) As shown in Table 3, the survey was comprised of 15 items that were aligned with the standards for SES providers as listed on the SES Provider Effectiveness Report. The survey was reviewed for use in this study by an expert panel and deemed valid. Therefore, the parent survey was readily adopted for use in this study.

**Table 3**  
Parent Survey Alignment With SES Provider Standards

<table>
<thead>
<tr>
<th>Survey No.</th>
<th>Survey statement</th>
<th>Standard</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The tutor reported to you about your child’s grades.</td>
<td>Communication</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>2</td>
<td>The tutor talked with you about your child.</td>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>The tutor talked with your child’s teachers about your child’s progress.</td>
<td>Communication</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>Survey No.</td>
<td>Survey statement</td>
<td>Standard</td>
<td>Indicator</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>4</td>
<td>I saw improvement in my child’s grades.</td>
<td>Student Achievement</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>I saw improvement in my child’s homework.</td>
<td>Student Achievement</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Your child’s feelings about school improved.</td>
<td>Student Achievement</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Your child attended the tutoring sessions regularly.</td>
<td>Student Achievement</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Your child attended all the tutoring sessions.</td>
<td>Student Achievement</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provider Requirements/Assurances</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>The tutoring services were provided as promised.</td>
<td>Provider Requirements/Assurances</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>The services were useful to you as a parent.</td>
<td>Communication</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>The services were useful to your child.</td>
<td>Communication</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Your child enjoyed the tutoring time. It was usually not a struggle to get him/her to participate.</td>
<td>Communication</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>It was easy to get answers from the tutor whenever you had questions.</td>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>It was easy to get answers from the school teachers or principal whenever you had questions.</td>
<td>Communication</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>If your child is eligible to receive services next year, you would probably choose the same tutor.</td>
<td>Communication</td>
<td>3</td>
</tr>
</tbody>
</table>
Teacher Survey

In addition to the parent survey, a teacher survey was developed by the SES evaluators for use in the ODE SES Evaluation Project. The process of developing the teacher survey included investigating the purpose and goals of SES and aligning the survey questions with ODE performance indicators for SES providers. As shown in Table 4, the survey was comprised of 16 items that were aligned with the standards for SES providers as listed on the SES Provider Effectiveness Report. The survey was reviewed for use in this study by an expert panel and deemed valid. Therefore, the teacher survey was readily adopted for use in this study.

Table 4

Teacher Survey Alignment With SES Provider Standards

<table>
<thead>
<tr>
<th>Survey No.</th>
<th>Survey statement</th>
<th>Standard</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The tutor offered an instructional program for my students aligned with state academic standards.</td>
<td>Provider</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Requirements/Assurances</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The tutor offered you the opportunity to provide input and feedback on student academic goals for SES.</td>
<td>Communication</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>3</td>
<td>The tutor offered evidence of student achievement and progress through shared assessment.</td>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student Achievement</td>
<td>1 &amp; 4</td>
</tr>
<tr>
<td>4</td>
<td>The tutor offered evidence of achievement and progress through student educational plans.</td>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student Achievement</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>The tutor offered on-going communication with you about student progress.</td>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td>Survey No.</td>
<td>Survey statement</td>
<td>Standard</td>
<td>Indicator</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>6</td>
<td>In your classroom, there was a positive change in the students’ grades.</td>
<td>Student Achievement</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>In your classroom, you noticed a positive change concerning student homework completion.</td>
<td>Student Achievement</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>In your classroom, you noticed a positive change concerning student performance on lessons.</td>
<td>Student Achievement</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>In your classroom, you noticed your students have experienced a positive change on state or district level testing.</td>
<td>Student Achievement</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>10</td>
<td>In your classroom, you noticed a positive change of student attitudes.</td>
<td>Student Achievement</td>
<td>1 &amp; 4</td>
</tr>
<tr>
<td>11</td>
<td>In your classroom, you noticed a positive change concerning student attendance.</td>
<td>Student Achievement</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Services were provided as promised.</td>
<td>Provider Requirements/Assurances</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>This program provided useful services to me as a classroom teacher.</td>
<td>Communication</td>
<td>1, 2, 3, &amp; 3</td>
</tr>
<tr>
<td>14</td>
<td>This program provided useful services to the students involved.</td>
<td>Student Achievement</td>
<td>1, 2, 3, &amp; 4</td>
</tr>
<tr>
<td>15</td>
<td>It was usually not a struggle to get the students to participate in the tutoring program.</td>
<td>Communication</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>It was easy to get answers from the tutor whenever I had questions.</td>
<td>Communication</td>
<td>2</td>
</tr>
</tbody>
</table>
In analyzing which performance standards and indicators were covered by both the parent survey and teacher survey combined, one finds that all but three standards have been included in the survey process. The three benchmarks are within the Provider Requirements/Assurances category. The indicators not included are:

1. Provider presents evidence that staff qualifications meet minimum state requirements.
2. Provider consistently meets health, safety, and civil rights requirements.
3. Provider reports, to LEA, the number of students served by grade level.

These standards cannot be easily answered by parents or teachers and would require sufficient documentation to indicate their compliance. Therefore, it is understandable why these were not included in the survey process.

Variable List

For purposes of statistical analysis the variables were coded. The variables on the surveys were coded as follows:

Parent Survey

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRG</td>
<td>Tutor reported to you about your child’s grades.</td>
</tr>
<tr>
<td>TTC</td>
<td>Tutor often talked with you about your child.</td>
</tr>
<tr>
<td>Progress</td>
<td>Tutor talked with your child’s teachers about your child’s progress.</td>
</tr>
<tr>
<td>Grades</td>
<td>I saw improvement in my child’s grades.</td>
</tr>
<tr>
<td>HW</td>
<td>I saw improvement in my child’s homework.</td>
</tr>
<tr>
<td>Feelings</td>
<td>Your child’s feelings about school improved.</td>
</tr>
<tr>
<td>Attendance</td>
<td>Your child attended the tutoring sessions regularly.</td>
</tr>
<tr>
<td>AttendI</td>
<td>Your child attended all the tutoring sessions.</td>
</tr>
<tr>
<td>Provide</td>
<td>The tutoring sessions were provided as promised.</td>
</tr>
</tbody>
</table>
UsefulP: The services were useful to you as a parent.
UsefulC: The services were useful to your child.
Enjoy: Your child enjoyed the tutoring time.
AnswTut: It was easy to get answers from tutors whenever you had questions.
AnswCT: It was easy to get answers from school teachers or principal whenever you had questions.
Choice: If eligible, probably choose the same tutor.

Teacher Survey

AlignStSt: The tutor offered an instructional program for my students aligned with state academic standards.
InputFdbk: The tutor offered you the opportunity to provide input and feedback on student academic goals for supplemental educational services.
EvidProgress: The tutor offered evidence of student achievement and progress through shared assessment.
EDplans: The tutor offered evidence of student achievement and progress through student educational plans.
Comm: The tutor offered on-going communication with you about student progress.
Grades: In your classroom, there was a positive change in the student’s grades.
HWII: In your classroom, you noticed a positive change concerning student homework completion.
LP: In your classroom, you noticed a positive change concerning student performance on lessons.
Testing: In your classroom, you noticed your students’ have experienced a positive change on state or district level testing.
Attitudes  In your classroom, you noticed a positive change of student attitudes.

Attendance  In your classroom, you noticed a positive change concerning student attendance.

Servprovided  Services were provided as promised.

UsefulT  This program provided useful services to me as a classroom teacher.

UsefulST  This program provided useful services to the students involved.

Participate  It was usually not a struggle to get the student to participate in the tutoring program.

Answers  It was easy to get answers from the tutor whenever I had questions.

Data Collection

The evaluators from the College of Education, Department of Educational Leadership and Foundations at The University of Akron were contracted by the ODE to conduct external evaluations of the SES providers. The contract was on-going, beginning in academic year 2004-05 and extending to 2007-08. The three purposes of the Evaluation Project were (1) to enhance the communication between school districts, SES Providers, and Evaluators; (2) to provide technical support to school districts and SES providers in collecting and documenting the implementation of services; and (3) to evaluate the effectiveness of SES by approved providers (Kruse et al., 2005, 2006; Kruse et al., 2004). In March 2005, this researcher was hired, as a research assistant, for the SES Evaluation Project. The data collected from 2004-05 through 2006-07 were made available to the researcher for purposes of further study.
Reading and Mathematics Achievement Scores

State-approved, SES providers are required to document individual student progress through evidence of diagnostic data and assessment results (Kruse et al., 2006). SES providers collected and relinquished pre- and post-test scores to the evaluators for purposes of evaluating provider effectiveness. This research used learning gains in reading and math and pretest and posttest scores for math. While ODE identified various SES providers for evaluation over the 3 years, the Jefferson Elementary School provider remained in the sample continuously.

Parent Survey

Parent surveys were hard copies that were mailed in the traditional manner. Subjects were invited to participate with an introductory letter. The cover letter (see Appendix B) explained the rationale for the research and included a confidentiality statement. A copy of the parent survey can be found in Appendix C. Data collection took place each year in spring, beginning in March/April extending through May/June. The survey process lasted approximately 4 weeks, each session. The rule of thumb was to have a minimum of five respondents per survey item. The parent survey contained 15 items. While a good survey response would require 75 participants, the actual number of respondents fell short each year, as indicated by Table 5.
Table 5

Parent Survey Response Rates

<table>
<thead>
<tr>
<th>School year</th>
<th>SES provider</th>
<th># of Surveys mailed</th>
<th># Parent responses</th>
<th>Parent response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>Jefferson</td>
<td>25</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2005-06</td>
<td>Franklin</td>
<td>200</td>
<td>23</td>
<td>11.5%</td>
</tr>
<tr>
<td>2006-07</td>
<td>Jefferson</td>
<td>264</td>
<td>9</td>
<td>3.41%</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>27</td>
<td>10</td>
<td>37.04%</td>
</tr>
<tr>
<td></td>
<td>Jefferson</td>
<td>684</td>
<td>42</td>
<td>6.14%</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Although the evaluators endeavored to enlist the participation of as many parents as possible, the parent survey response rate remained low. The low survey response may be attributed to several factors. These include the transient nature of the SES student population, the number of non-English-speaking parents, or the lack of connection between the SES provider and evaluator.

Teacher Survey

Teacher surveys were hard copies that were mailed in the traditional manner. Subjects were invited to participate with an introductory letter. The cover letter (see Appendix B) explained the rationale for the research and included a confidentiality statement. A copy of the teacher survey can be found in Appendix D. Data collection took place each year in spring, beginning in March/April extending through May/June. The survey process lasted approximately 4 weeks, each session. The teacher survey
contained 16 items. While a good survey response would require 80 participants, the
actual number of respondents fell short each year, as indicated by Table 6

Table 6
Teacher Survey Response Rates

<table>
<thead>
<tr>
<th>School year</th>
<th>SES provider</th>
<th># of Surveys mailed</th>
<th># Teacher responses</th>
<th>Teacher response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>Jefferson</td>
<td>25</td>
<td>1</td>
<td>4.0%</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>200</td>
<td>41</td>
<td>20.5%</td>
</tr>
<tr>
<td>2005-06</td>
<td>Jefferson</td>
<td>264</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>26</td>
<td>1</td>
<td>4.0%</td>
</tr>
<tr>
<td>2006-07</td>
<td>Jefferson</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Although the evaluators attempted to procure as many teacher surveys as possible,
the response rate remained low. The low survey response may be attributed to several
factors. These include the amount of paperwork teachers encounter at the end of the
school year, their unfamiliarity with the SES Evaluation Project, or other.

Statistical Treatment

For purposes of statistical treatment both quantitative and qualitative analyses
were used in this study.

Quantitative Analysis

The quantitative data were in the form of learning gains on academic assessments
for reading and mathematics, pretest and posttest scores for mathematics, and survey
responses generated over the course of the 3 year Evaluation Project. Individuals with
incomplete data such as a pretest score and no posttest score were eliminated. Since the data were not representative of the entire sample, the researcher felt it necessary to have complete records for the individuals on record. A *t* test for dependent means was conducted to determine the statistical significance of the difference between the pre- and post-tests for each group. The data were analyzed with both descriptive and inferential statistics to determine discrepancies in the distribution. Means, standard deviation, skewness, and kurtosis were determined and reported for critical variables.

*Type I Error.* The researcher faced a challenge regarding statistical power and analysis because the sample sizes varied and were uncontrolled due to the ex post facto nature of the research. For samples A, B, C, D, E, and G, the level of risk was set at .10. For sample F, the level of risk was set at .001 and for sample H at .05. The pre- and post-test scores are continuous scales. The appropriate statistical test was determined to be a *t* test for dependent means because in each group each participant was tested twice. This statistical procedure provided information regarding the difference between pre and posttest scores. Often, in exploratory research a less rigorous standard for rejection is desired (Cohen, 1992). For GH 1.1 and 1.2, the level of risk was increased because the power of the statistical test had to be increased in order to detect differences. Finally, for GH 2.1 and 2.2, the level of risk was set at .05. The researcher investigated SES effectiveness standards by means of parent survey responses in predicting student learning gains in reading and mathematics. The statistical measure used was a non-directional multiple regression. The purpose of this question was to identify strengths and weaknesses in provider practices specifically related to standards and student
learning outcomes. Effect size was calculated to determine the sample size required and the power associated.

Effect Size (ES). According to Cohen (1992), “It is most useful to determine the N necessary to have a specified power for given (significance criterion) and ES” (p. 156). In ex post facto research, where the researcher cannot control the sample size, it is necessary to determine the effect size in order to set the Type I error. The ES was used to quantify the effectiveness of SES because it clarified the results and explained how well SES treatment worked (Cohen, 1988; Rosnow & Rosenthal, 1996). The ES allows results to be interpreted beyond statistical significance to practical implication and determine whether or not the results add to the general body of knowledge (Cohen, 1992). Each statistical test has its own ES. The ES is calculated by dividing the difference between the means by the standard deviation (Miller & Salkind, 2003).

Because ES is a ratio, a larger effect size will occur when there is a larger difference between the means, or there is a smaller difference in the standard deviations. A number of researchers advocate that statistical significance does not reveal the most important thing, the true size of the effect. The best reporting method is to state the effect size in addition to the statistical significance (Cohen, 1992). The effect of SES on student achievement in math and reading was presumed to be large; i.e., noticeable to the observer.

Sample Size. To determine whether the samples that were provided were sufficient and would attain the desired power, the researcher followed several steps. The first step was to select the appropriate test of statistical significance. In this study, a t test for dependent means was selected for G.H. 1.1 and 1.2 and multiple regression for G.H.
2.1 and 2.2. In order to minimize the risk of Type I error, the investigator examined the necessary sample sizes determined by Cohen (1992) for the specified levels of significance and effect sizes. The suggested sample size for t test of dependent means (GH 1.1) with a large ES and level of significance .10 was 20 participants. The N’s for the groups with the level of significance of .10 were 11, 6, 46, and 17. From 2002 to 2004, SES participation increased from 7% to 19% (David et al., 2006). The rate of increase was reflected in this study’s sample size. Group H met the required sample size for t test for dependent means with a large effect size and level of significance .05 is 26 participants which group H met. Group F met the suggested sample size for t test for dependent means with a large effect size and level of significance .01 was 38 participants. General hypotheses 2.1 and 2.2 using a multiple regression statistical procedure with a level of significance of .05 and effect size value of .35 suggested a sample size of 34. The available sample consisted of 61 and met the requirements for sample size. The researcher established statistical independence for the multiple findings from the Evaluation Project; this prevented undue weight or significance being given to a particular sample and its method.

In spite of the risk of Type II error, due to insufficient sample sizes of groups A, B, D, E and G, it was decided to proceed with the analysis. Two meta-analyses were conducted to estimate the correlations among reading and math achievement and SES participation. The project resulted in two groups for reading and two groups for math. For each sample, the means and standard deviation of the pre- and post-tests were determined and the ES, correlation coefficient r were calculated. One ES and probability were provided for each sample in meta-analysis. The samples were weighted because
they were not of equal size. For example, Group B, with a sample size of 6, was weighted less group F with a sample size of 312. To calculate the weighted mean ES, the researcher multiplied each mean by its $n$ and then divided that number by the total $N$ for that mean.

The heterogeneity of ES was examined to discern whether the studies/samples in the meta-analysis differ from one another. The most contributing factor in heterogeneity was sample size. To find the heterogeneity of the studies the researcher calculated $Q$ statistics in a test of heterogeneity and then distributed the scores in a Chi-square. Next the researcher examined the heterogeneity of the ES by equating the Fisher’s transformed $r$-scores ($r’$) of the studies to determine whether or not they were significantly different. The researcher then tested the heterogeneity of probabilities and calculated the confidence intervals. The confidence interval was an estimate of where the population parameter was likely to fall. Finally, the researcher computed the number of non-significant studies which would have to be hidden away or filed away; hence the term Fail-safe N, in order to make the meta-analysis non-significant. If the Fail-safe N was larger than the determined number of studies, then the meta-analysis was considered valid.

**Qualitative Analysis**

Qualitative data were collected from teacher surveys, parent and teacher interviews, and observations. The researcher examined the transcripts to determine how the data aligned with the quantitative findings, triangulating the data. The research questions specific to this analysis were three, four, and five.
Limitations

Since the investigation focused on SES students in two public school districts within the state of Ohio, this study was limited. The sample was a small representation of the overall SES population including SES providers, parents, students, and teachers. Although research has found SES population to be similar in composition (U.S. Department of Education, 2005e, 2004b), results may greatly differ from state to state. Because SES is a newly implemented sanction, there may also be changes in SES effectiveness over time. Therefore, the research sample may not be generalizable to all SES students and providers. The study was also limited by the anonymity of the survey in that relationships between specific student learning gains and survey variables could not be investigated. The data were collected ex post facto. In ex post facto design one cannot manipulate variables or assume causation.

Summary

This chapter outlined the research study detailing several areas. It began with a description of the participants and sampling procedures. Next, the general research hypotheses, along with the specific research hypotheses were reported. In the section that followed, details of research design, instruments, variables, methods for data collection, and statistical treatments were given. This chapter concluded by addressing the limitations of the study.
CHAPTER IV
RESULTS

Demographic and Descriptive Statistics

This chapter presents the results of investigating the relationship between SES and achievement gains in a representative sample of SES students within Ohio and to identify strengths and weaknesses in provider practices that contribute to student learning gains in reading and math. Data were specific to the group of students whose pre- and post-test scores within the school districts that were part of the SES Evaluation Project from 2004-05 through 2006-07 school years.

Due to the requirements for eligibility and participation in the SES program, demographics were not investigated. To qualify for SES services, students must be identified as originating from low-income families, high-poverty schools, and are placed in the lower percentile rankings for statewide assessments. A pilot study conducted in 2007 revealed sex, ethnicity, and particular school had no effect on student learning gains in reading and math (Beese, 2007). Studies reflecting samples across the nation have shown similar composition in SES populations (U.S. Department of Education, 2005e, 2004b). This chapter is organized sequentially by research question.
Descriptive Statistics

The pre-and post-test scores were the variables used in the study. Both variables are continuous scales. The first general hypothesis is a directional one-tailed hypothesis because it posits that the posttest scores will be higher than the pretest scores. In a meta-analysis, there has to be a directional hypothesis tested. According to Cohen (1992), if the direction were two-tailed, the studies which pointed in one direction combined with the studies in the opposite direction would imply a more significant finding than justifiable.

Data were collected from eight samples in the form of pre- and post-tests. Each sample is a subgroup of the SES Evaluation Project. The instruments varied by SES provider. Providers turned over tests scores to the evaluators. The samples were derived from the external evaluation of providers for the SES Evaluation Project. Samples were collected over a 3-year period. Data for samples A and B were collected during the 2004-05 school year in reading. During the 2005-06 school year, data were collected for samples C, D, and E in reading and sample G in math. For the 2006-07 school year, data were collected for sample F in reading and sample H in math. There were six reading samples and two math samples.

There were the fewest number of participants in samples B with 6 and D with 8, followed by samples A and E with 12, sample G with 17, sample C with 46, sample H with 119, and sample F with 312 participants. The mean of participants in a sample is 61.25 with a standard deviation of 108.34. See Figure 2 for sample distribution. The skewness is 2.27 and suggests that most of the participants came from a few large samples but some participants came from much smaller samples. This means the sample
distribution was skewed to the left, as indicated by the tail. The kurtosis is 5.07 indicating a leptokurtic or peaked distribution. Rather than treating all the samples as equal, sample size was taken into account and the samples were weighted by the number of participants in each sample. This way samples with larger numbers of participants had greater influence on the results of the meta-analysis.

![Sample distribution chart]

Figure 2. Sample distribution.

Pre- and post-tests were used to measure reading and math achievement. The tests were administered at the beginning and at the end of the tutoring sessions. Measures of variability were used to fully understand the distribution of the data. Variability determined how different the scores are from the mean. The first continuous variable examined was pretest scores. See Table 7 for pre and post test descriptive data. All pre and post test scores were distributed within the acceptable ranges with the exception of samples B, E, and G. Sample B’s pre and post tests had a kurtosis of 1.74. This denotes a somewhat peaked curve with many of the scores falling within the range. Sample E’s
<table>
<thead>
<tr>
<th>Sample</th>
<th>Subject</th>
<th>N</th>
<th>Measure</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Reading</td>
<td>11</td>
<td>Pretest</td>
<td>54.09</td>
<td>13.99</td>
<td>-.78</td>
<td>-.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>47.64</td>
<td>15.92</td>
<td>.96</td>
<td>.14</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>6</td>
<td>Pretest</td>
<td>353.33</td>
<td>7.00</td>
<td>.50</td>
<td>1.74*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>382.00</td>
<td>30.35</td>
<td>-.06</td>
<td>1.74*</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>46</td>
<td>Pretest</td>
<td>225.43</td>
<td>77.04</td>
<td>-.25</td>
<td>-.42</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>271.96</td>
<td>75.14</td>
<td>.09</td>
<td>-.41</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>8</td>
<td>Pretest</td>
<td>4.75</td>
<td>1.03</td>
<td>-.39</td>
<td>-.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>5.50</td>
<td>1.06</td>
<td>.47</td>
<td>-.83</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>12</td>
<td>Pretest</td>
<td>11.83</td>
<td>8.10</td>
<td>.91</td>
<td>-.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>18.75</td>
<td>11.87</td>
<td>-.04</td>
<td>-1.46*</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>312</td>
<td>Pretest</td>
<td>2.66</td>
<td>1.69</td>
<td>.50</td>
<td>-.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>3.31</td>
<td>1.78</td>
<td>.91</td>
<td>-.55</td>
</tr>
<tr>
<td>G</td>
<td>Math</td>
<td>17</td>
<td>Pretest</td>
<td>7.47</td>
<td>6.85</td>
<td>2.48*</td>
<td>7.20*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>12.00</td>
<td>9.51</td>
<td>1.45*</td>
<td>2.09*</td>
</tr>
<tr>
<td>H</td>
<td></td>
<td>119</td>
<td>Pretest</td>
<td>3.52</td>
<td>1.59</td>
<td>-.52</td>
<td>-.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Posttest</td>
<td>3.49</td>
<td>1.33</td>
<td>-.52</td>
<td>.15</td>
</tr>
</tbody>
</table>

Note. *Indicates skewness or kurtosis outside of the acceptable 1.2 range.

Posttest scores reveal the same type of curve with a kurtosis of 1.46. Sample G pretest scores had a skewness of 2.48 and kurtosis of 7.20. This suggests the distribution was positively skewed with a relatively peaked leptokurtic curve. A smaller number of scores were at the high end of the distribution and most of the scores fell within the same range. Sample G posttest scores had a skewness of 1.45 and kurtosis of 2.09. This indicates as a group the scores moved upwards but remained at the lower end of the bell curve and the
majority of scores fell within the same range. It is understandable that the scores would
fall at the lower end of the bell curve and fall within the same range considering program
type and student.

A t test for dependent means was used to calculate the difference between the
means for pre- and post-test scores for each sample. See Table 8, for results of the t tests
for dependent means. For sample A, \( t = 1.17, p < .26 \) and is not statistically significant.
Statistical analysis for sample B revealed, \( t = 2.27, p < .07 \) which is statistically
significant. Statistical analysis for sample C revealed, \( t = 5.40, p < .00 \), sample D, \( t = 
4.58, p < .00 \), sample E, \( t = 3.40, p < .00 \), sample F, \( t = 19.73, p < .00 \), and sample G, \( t =
3.02, p < .00 \) which are all highly statistically significant. Further analysis revealed no
statistically significant difference in math scores for sample H. The results of these
Table 8

<table>
<thead>
<tr>
<th>Sample</th>
<th>Pre-test X</th>
<th>sd</th>
<th>Post-test X</th>
<th>sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>54.09</td>
<td>13.99</td>
<td>47.64</td>
<td>15.92</td>
<td>1.17</td>
<td>-.26</td>
</tr>
<tr>
<td>B</td>
<td>353.33</td>
<td>7.00</td>
<td>382.00</td>
<td>30.35</td>
<td>2.27</td>
<td>.07**</td>
</tr>
<tr>
<td>C</td>
<td>225.43</td>
<td>77.04</td>
<td>271.96</td>
<td>75.14</td>
<td>5.40</td>
<td>.00**</td>
</tr>
<tr>
<td>D</td>
<td>4.75</td>
<td>1.03</td>
<td>5.50</td>
<td>1.06</td>
<td>4.58</td>
<td>.00**</td>
</tr>
<tr>
<td>E</td>
<td>11.83</td>
<td>8.10</td>
<td>18.75</td>
<td>11.87</td>
<td>3.40</td>
<td>.00**</td>
</tr>
<tr>
<td>F</td>
<td>2.66</td>
<td>1.69</td>
<td>3.31</td>
<td>1.78</td>
<td>19.73</td>
<td>.00*</td>
</tr>
<tr>
<td>G</td>
<td>7.47</td>
<td>6.85</td>
<td>12.00</td>
<td>9.51</td>
<td>3.02</td>
<td>.00**</td>
</tr>
<tr>
<td>H</td>
<td>3.52</td>
<td>1.59</td>
<td>3.49</td>
<td>1.33</td>
<td>0.81</td>
<td>-.41</td>
</tr>
</tbody>
</table>

Note. *statistical significance at .10. **statistical significance at .05.
studies indicate significantly greater achievement post SES on average for the intervention subject areas.

Question One

Is student participation in Supplemental Educational Services positively related to increased student achievement?

Is there a statistically significant relationship between student participation in Supplemental Educational Services and students’ increased reading achievement?

Is there a statistically significant relationship between student participation in Supplemental Educational Services and students’ increased math achievement?

The purpose of the general research question was to determine the effect of student participation in SES and increased student achievement. In this study, the results of eight samples were combined to determine the common effect of SES. The $t$ values were converted into $r$ values. Where the original result indicated a negative effect, the posttest had a larger mean than the pretest, and then the $r$ was treated as negative. To convert the $t$ values into $r$, the researcher used the following equation (Clark-Carter, 1997, p. 550):

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

Weighting the Samples. Each study had a different sample size; therefore, it was important to weight the studies appropriately. The effect size for a large number of participants is assumed to be a more precise estimate of the population of the effect size based on a much smaller population. Therefore, larger samples were adjusted to carry
more weight in the analysis than smaller studies. The weighted mean was calculated with
the following equation (Clark-Carter, 1997, p. 381):

\[
\text{Weighted Mean } r^1 = \frac{n \times r}{N}
\]

Confidence Intervals. Confidence intervals for the wES were computed and
comparisons made to determine the reliability of the effect size. The level of significance
was 95\%. To determine the confidence level at the 95\% level of confidence, the
researcher used the following equation (Clark-Carter, 1997, p. 559):

\[
\text{CI} = r \pm \frac{1.96}{\sqrt{n-3}}
\]

Table 9 provides a summary index of the combined procedures of statistical significance
of the \(t\)-test results.

Table 9

<table>
<thead>
<tr>
<th>Sample</th>
<th>Subject</th>
<th>( n )</th>
<th>( df )</th>
<th>( t )</th>
<th>( r )</th>
<th>wES ( r^1 )</th>
<th>Confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Reading</td>
<td>11</td>
<td>10</td>
<td>1.17</td>
<td>-0.35</td>
<td>-0.01</td>
<td>-0.69 to 0.69</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>6</td>
<td>5</td>
<td>2.27</td>
<td>0.71</td>
<td>0.01</td>
<td>-1.13 to 1.14</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>46</td>
<td>45</td>
<td>5.40</td>
<td>0.63</td>
<td>0.07</td>
<td>-0.29 to 0.31</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>8</td>
<td>7</td>
<td>4.58</td>
<td>0.87</td>
<td>0.02</td>
<td>-0.86 to 0.00</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>12</td>
<td>11</td>
<td>3.40</td>
<td>0.72</td>
<td>0.02</td>
<td>-0.65 to 0.67</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>312</td>
<td>311</td>
<td>19.73</td>
<td>0.75</td>
<td>0.59</td>
<td>-0.08 to 0.15</td>
</tr>
<tr>
<td>G</td>
<td>Math</td>
<td>17</td>
<td>16</td>
<td>3.02</td>
<td>0.60</td>
<td>0.08</td>
<td>-0.46 to 0.49</td>
</tr>
<tr>
<td>H</td>
<td></td>
<td>119</td>
<td>118</td>
<td>0.81</td>
<td>-0.07</td>
<td>-0.06</td>
<td>-0.19 to 0.18</td>
</tr>
</tbody>
</table>

Combining Effect Size. Effect sizes were combined according to the following
equation (Clark-Carter, 1997, p. 558):

\[
\text{Combined } r = \frac{\sum (n_j \times r_j)}{\sum n_j}
\]
\[
\text{Combined } r^1 = \frac{\sum (n_j \times r^1_j)}{\sum n_j}
\]

The combined effect sizes for reading were 0.71 and 0.01 for math. The combined \(r^1\) for the groups were reading 0.48 and math -0.04.

Table 10

<table>
<thead>
<tr>
<th>Group</th>
<th>(N)</th>
<th>ES</th>
<th>Weighted Mean (r^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>395</td>
<td>0.71</td>
<td>0.48</td>
</tr>
<tr>
<td>Math</td>
<td>136</td>
<td>0.01</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

_Heterogeneity for Effect Size._ A chi-square was used to determine the degree of probability that the observed variance in ESs was the result of sample error alone. The criterion was set at .05. For reading the \(df = 5\) and \(x^2 = 12.67\). The critical value for chi-square with \(df = 5\) and \(p < .05\) is 11.07. The \(x^2\) is greater than the critical value indicating the variability across effect sizes does exceed what would be expected. This may be due to the degree of variance between sample sizes amongst studies. Sample F contributes the most to the heterogeneity of the study. The studies are considerably heterogeneous and the researcher is cautioned that a type I error may be the end result. A chi square was calculated to determine the heterogeneity of math samples. The critical value for chi-square with \(df = 1\) and \(p < .05\) is 3.84. The \(x^2\) value for math is 0.15 and does not exceed the critical value indicating the distribution of effect sizes is homogenous and none of the samples need to be removed.
**The Confidence Interval.** Confidence intervals for ES and wES were computed and comparisons made to determine the reliability of the effect size. The level of significance was 95%. To determine the confidence level at the 95% level of confidence, the researcher divided 1.96 by the square root of the total number of participants minus three in each study and added and subtracted this number by the combined effect size. The confidence intervals for reading were 0.3791 to 0.5809 and do not intersect zero. Therefore, the probability that there is a true effect in reading is substantial. The confidence intervals for math were -0.2119 to 0.1319. Because a zero falls within the confidence interval ranges for math, it is uncertain whether there is a true effect.

**The File-Drawer Problem.** One shortcoming of conducting a meta-analysis is that a researcher only has access to studies that have been published. This is known as the file drawer problem (Gall, Gall, & Borg, 2005). This problem is further aggravated in the number of nonsignificant studies that remain unpublished. The fail safe N is the number of nonsignificant unpublished studies that would need to be filed away in order to cause the meta-analysis to be insignificant (Clark-Carter, 1997). To calculate the fail-safe N the researcher multiplied the number of studies by the number of studies times the number of studies times the z area ^2 minus 2.706 and divided that number by 2.706. The Fail-safe N for reading was 812 studies and the critical number of nonsignificant studies 40. There would have to exist at least 812 nonsignificant studies to render the meta-analysis for reading insignificant because that number exceeds the critical number; therefore, no file drawer problem exists. The number of significant studies that would need to exist for math to be significant was 2 and the critical number of nonsignificant studies 20. The critical number exceeds the fail-safe N and therefore the study suffers
from a file drawer problem. It must be noted that none of the samples in this study have been published and in effect this study is the Fail-safe N.

Table 11

Meta Analysis Summary Table

<table>
<thead>
<tr>
<th>Variable</th>
<th>No.</th>
<th>N</th>
<th>r</th>
<th>r1</th>
<th>Lower Bound wCI</th>
<th>Upper Bound wCI</th>
<th>Fail-safe N</th>
<th>Critical No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>6</td>
<td>395</td>
<td>.71</td>
<td>.48</td>
<td>0.3791 to 0.5809</td>
<td></td>
<td>812</td>
<td>40</td>
</tr>
<tr>
<td>Math</td>
<td>2</td>
<td>136</td>
<td>.01</td>
<td>.04</td>
<td>-0.2119 to 0.1319</td>
<td></td>
<td>2</td>
<td>20</td>
</tr>
</tbody>
</table>

**Question Two**

Is there a statistically significant relationship between the standards, included in the parent survey, in predicting student learning gains in reading and math?

The purpose of this question was to explore the predictable relationship between SES provider standards and student achievement. Similar provider comparisons were made by the Chicago Public School Evaluation of SES (2005). As shown in Figure 3, student learning gains differed by sample. Samples B, C, D, E, F, and G demonstrated net gains. Samples A and H demonstrated a decline in mean scores post SES. The pre- and post-tests vary by sample; therefore, means alone were not comparable.
The researcher determined the best measure would be a common score. The combined effect sizes were calculated using the same equation used in research question one; however, instead of calculating for subject area an overall effect size was calculated for each provider. The combined effect size for Jefferson was .51 and the combined effect size for Franklin was .46.

The answers to the survey questions were in the form of a Likert scale. The raw data were put into SPSS data sheet with each response by question. The responses were transformed into three new variables which were student achievement, communication, and provider/requirements/assurances. To compute the new variable, the researcher multiplied the number of independent variables associated with the standard by the mean times the minimum percentage of responses required in that strand (this provided allowance for items with no response) by each the sum of each independent variable divided by the number of independent variables associated with the standard (Green & Salkind, 2008). For example, the equation used for calculating the communication variable for parent surveys was:

\[ 10 \times \text{MEAN.2}(q1, q2, q3, q9, q10, q11, q12, q13, q14, q14) / 10 \]
Multicollinearity is a problem related to significant intercorrelations among predictor variables (Mertler & Vannatta, 2005). In order to establish a reliable equation, consideration was given to the number of respondents versus the number of predictors. The recommended ratio is 15 subjects for each predictor (Mertler & Vannatta, 2005). The total \( N \) was 73 participants, which exceeds the recommended number for three predictor variables.

Test assumptions and limitations were investigated using tests of homoscedasticity and normality (see Table 12). All of the predictor variables demonstrate peaked curves falling within the higher range.

Table 12

Predictor Variable Distribution

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. dev.</th>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Achieve</td>
<td>3.70</td>
<td>0.52</td>
<td>0.27</td>
<td>-1.84</td>
<td>2.56</td>
</tr>
<tr>
<td>Communication</td>
<td>3.73</td>
<td>0.39</td>
<td>0.15</td>
<td>-1.69</td>
<td>2.99</td>
</tr>
<tr>
<td>Prov. Assur.</td>
<td>3.78</td>
<td>0.53</td>
<td>0.29</td>
<td>-2.70</td>
<td>6.97</td>
</tr>
</tbody>
</table>

Note. \( N = 73 \).

A correlation matrix was used to examine the multicollinearity of the predictor variables (see Table 13).
Table 13
Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Student achievement</th>
<th>Communication</th>
<th>Provider assurances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student achievement</td>
<td>1.00</td>
<td>.80</td>
<td>.82</td>
</tr>
<tr>
<td>Communication</td>
<td>1.00</td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>Provider assurances</td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

Student achievement demonstrated a very strong relationship with both communication and provider assurances and communication was found to have a strong relationship with provider assurances. Because the correlation matrix demonstrated a problem with multicollinearity, tolerance statistics were examined. Table 14 illustrates tolerance statistics for predictor variables.

Table 14
Tolerance Statistics

<table>
<thead>
<tr>
<th></th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Achievement</td>
<td>.33</td>
</tr>
<tr>
<td>Communication</td>
<td>.36</td>
</tr>
<tr>
<td>Provider Assurances</td>
<td>.33</td>
</tr>
</tbody>
</table>

According to Mertler and Vannatta (2005), “typically, a value of 0.1 serves as the cutoff point – if the tolerance value for a given IV is less than 0.1, multicollinearity is a distinct problem” (p. 169). All of the tolerance statistics exceeded .1, indicating the independent variables were appropriate for the regression model. Outliers were identified.
by calculating Mahalanobis distances and a chi square determined which cases exceeded
the criteria, see Table 15. The critical value of chi square at $p < .05$ with $df = 2$ was 5.99.
Cases 2, 4, 33, 45, and 73 exceed the critical value and were deleted from the analysis.

Table 15

Outliers for Mahalanobis Distance

<table>
<thead>
<tr>
<th>Mahalanobis Distance</th>
<th>Case Number</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td>1</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Lowest</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>69</td>
</tr>
</tbody>
</table>

Note. *Exceeds critical value of 5.99.

A scatterplot matrix was used to analyze linearity, see Figure 4. Scatterplots
displayed nonlinearity for the following variables: student achievement, communication,
and effect size. These variables were transformed by taking the natural log of each. The
scatterplot matrix in Figure 5 depicts the transformed variables. The transformation did
not affect the overall shapes of the variables. The nonlinearity of shapes indicates a
problem with the degree of linearity among variables.
A stepwise multiple regression was conducted to determine which of the independent variables student achievement, communication, or provider assurances made the most meaningful contributions to student learning gains. This analysis was severely limited in that only two providers were used for the multiple regression over a one year timeframe. More solid research would use a greater number of providers and several years of results. Although the premise for the multiple regression was weak, it was conducted in an effort to provide information regarding the practices implemented by the
providers that did cause an increase in achievement. Regression results indicate an overall model of two predictors (student achievement and provider assurances) that significantly predict effect size, $R^2 = .166$, $R^2_{\text{adj}} = .153$, $F(66, 65) = 13.09$, $p < .00$. This model accounts for 17% of variance in student learning gains in reading and math. A summary of the regression model is presented in Table 16. Only two of the three variables significantly contributed to the model shown on Table 17.

Table 16
Model Summary

<table>
<thead>
<tr>
<th>Step</th>
<th>R</th>
<th>$R^2$</th>
<th>$R^2_{\text{adj}}$</th>
<th>$\Delta R^2$</th>
<th>$F_{\text{chg}}$</th>
<th>$p$</th>
<th>$df1$</th>
<th>$df2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student achievement</td>
<td>.407</td>
<td>.166</td>
<td>.153</td>
<td>.166</td>
<td>13.097</td>
<td>&lt;.001</td>
<td>1</td>
<td>66</td>
</tr>
<tr>
<td>Provider assurances</td>
<td>.503</td>
<td>.253</td>
<td>.239</td>
<td>.087</td>
<td>7.613</td>
<td>&lt;.008</td>
<td>1</td>
<td>65</td>
</tr>
</tbody>
</table>

Table 17
Coefficients for Final Model

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>$\beta$</th>
<th>$t$</th>
<th>Bivariate $r$</th>
<th>Partial $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. achieve</td>
<td>-.334</td>
<td>.717</td>
<td>-4.616*</td>
<td>-.407</td>
<td>-.497</td>
</tr>
<tr>
<td>Prov. assur</td>
<td>.076</td>
<td>.429</td>
<td>2.759*</td>
<td>-.091</td>
<td>.324</td>
</tr>
</tbody>
</table>

Note. *Indicates significance at $p < .000$.

According to the $B$ weights, the regression equation is Effect Size = -.33 Student Achievements - (-) .08 Provider/Assurances both were statistically significant at $p < .00$.

The independent variable communication was not statistically significant. Therefore,
student achievement and provider assurances account for a significant amount of unique variance over and above the other variables.

Question Three

In what ways do teachers report their attitudes toward SES since the enactment of NCLB? What factors contribute to the differences in these perceptions?

SES providers supplied the telephone lists for parents of SES students. Classroom teachers were interviewed by telephone. The open-ended interview questions regarded the implementation process of the supplemental educational services. Table 18 shows the number of teacher interviews by provider and year.

Table 18

<table>
<thead>
<tr>
<th>School year</th>
<th>Provider</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>Jefferson</td>
<td>1*</td>
</tr>
<tr>
<td>2005-06</td>
<td>Jefferson</td>
<td>2*</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>6</td>
</tr>
<tr>
<td>2006-07</td>
<td>Jefferson</td>
<td>2*</td>
</tr>
</tbody>
</table>

Note. *Administrators.

The questions asked for the phone interview were:

1. Please tell me about the program and how it worked for you. Tell me what it looked like and what skills were being focused on.

2. How did you know what progress was made?

3. What type of communication was there between the teacher, parent and tutors?
4. Were there any written reports provided?

5. Was it convenient for you and others to talk about issues and concerns?

6. What were the strength and weakness noted?

7. Was there anything that the teacher/parent felt important for this interviewer to know that was not already addressed in the above questions?

Program Administrator Interviews. Program administrators were interviewed to gain insight into how programs were organized, managed, and implemented. See Appendix F for administrative interview transcripts. Based on this research, it is our hope to identify a few critical points in the context of Ohio for a successful supplementary educational services program when Ohio providers plan to establish services to ensure the quality of the program and to provide the types of data needed to document the process and impact of the program. In the following, number consistent foci were outlined by administrators that included staffing, training, communication, and student assessment.

Most administrators reported the benefits of staffing SES strategically within the organizational structure of their district. At Jefferson Elementary School, tutors were certified teachers currently employed by Toledo Public Schools. The advantages to hiring teachers within the school district are increased connection with classroom teacher, students, and parents. At Jefferson, tutors were certified teachers currently employed by Jefferson Public Schools. One administrator stated, “What we have seen that is successful is that our teachers are able to tutor our own children and that they are highly qualified and that they know what standards are. It is not a waste of time -- it is an intervention program that is highly scripted.”
Training and professional development is fundamental to the successful implementation of SES. In Jefferson, the district program offered a series of four sessions of training for tutors held at the beginning of each tutoring program. As described by a district administrator, “Each tutor received 12 hours of training in scientifically based reading or math research prior to tutoring. Throughout the entire cycle, each tutor is coached by a reading or math literacy specialist.”

Most SES programs report parent/tutor conferences at the end of each session but one conference at the end of a tutoring session does not equate to effective communication. As research suggests, the student learning plan should be a coordinated effort between classroom teacher, tutor, and parent. The classroom teacher can provide a comprehensive understanding of student skill levels and learning needs because they work daily with students and possess information about their strengths and weaknesses. The tutor’s purpose is to complement and reinforce what is happening in the classroom, while parents provide motivation and occasions for students to practice their skills. An administrator stated, “We make copies of everything for the classroom teachers and parents. They are put in the homeroom teachers’ mailbox. A parent form goes home to parents.” Furthermore, “Communications with the parents involve regular progress reports and personal communication up to 2 times per week. Progress reports are sent out monthly and there are periodic open houses to allow parents to speak directly with the tutors if desired” as reported by Jefferson administrator. Another provider reported, making available “weekly newsletters for the parents that are very detailed in what we are doing”. By establishing a path of communication between parents, teacher, and tutor, the
efforts of those involved are supported and the prospect of increased student achievement is boosted.

Finally, SES programs must have a systematic method of assessing and tracking achievement. The most frequent means of assessment is the pre- and post-test design, where students are tested at the beginning and end of SES services. It is also important to monitor student attendance, in order to know whether or not students have received tutoring. Then, schools that experience truancy problems can develop methods of improving attendance. Several providers have successfully implemented incentives for students who attend regularly. In Jefferson, “When a student does not attend tutoring sessions, the classroom teacher, tutor, and principal contact the parents.” These areas were the most discussed by SES administrators. It will be interesting to see how the efforts of administrators are interpreted and received by classroom teachers.

Classroom Teacher Interviews. The classroom teacher interview findings were not in agreement with the administrative interview findings. See Appendix G for classroom teacher interview transcripts. Several teachers indicated very little to no knowledge of the SES program or the students involved, stating “I was given this survey to fill out. I’d like to know how I was selected on the list. I do not have any student involved in the program. I do not know anything about the program.” Or “I have no idea about the program. We are not made aware of how it takes place.” It was also reported that communication from tutor to teacher was minimal and no written reports were provided. Teachers felt they had no idea how progress was made and of the interventions that were being used. As one teacher shared, “We are not connected. There is no continuation of skills from classroom to after school tutoring.” While teachers possessed
very little firsthand knowledge regarding the SES program, several teachers noticed increased student achievement. As stated by a teacher, “Nathaniel’s confidence is up, his grades are up.” In general the sentiment reflected that the program was worthwhile but there was room for improvement. A weakness in the research design is that the classroom teacher interviews were derived from Franklin Elementary School while the administrative interviews were from Jefferson. Although both are district run programs and there should be some consistency between them, this may be the cause for the discrepancy in findings between administrators and classroom teachers. The difference between the two district programs may be indicative of differences in leadership and/or management. New programs often face enormous challenges and require experienced leaders who possess the know how to overcome difficulties and who can implement effective programs.

Question Four

In what ways do parents report their attitudes toward SES since the enactment of NCLB? What factors contribute to the differences in these perceptions?

SES providers gave a list of the SES students’ home phone numbers to the evaluators. Parent comments helped researchers to understand the process and outcomes of the SES program. See Appendix H for parents’ interview transcripts. Parents were interviewed by telephone. The open-ended interview questions regarded the implementation process of the supplemental educational services and were the same that were used for the teacher interviews. Table 19 shows the number of parent interviews by provider and year.
Table 19
Parent Interviews

<table>
<thead>
<tr>
<th>School year</th>
<th>Provider</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>Jefferson</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>6</td>
</tr>
<tr>
<td>2005-06</td>
<td>Jefferson</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>7</td>
</tr>
<tr>
<td>2006-07</td>
<td>Jefferson</td>
<td>89</td>
</tr>
</tbody>
</table>

Research findings imply that frequent communication between tutor and parent regarding student’s progress will enhance program outcomes (U.S. Department of Education, 2005e, 2004b). Parent interviews revealed a difference in communication efforts between providers. A Jefferson parent stated, “There was great communication between the parent and teacher with regular phone calls, parent/teacher conferencing, interim progress reports in addition to regular report cards, and discussions during pick up and drop off times.” In agreement another parent said, “There was regular communication with the parent feeling comfortable to come to the classroom to discuss any concerns. There was a strong sense of teamwork between the child, teacher and parent.” And lastly, “There is regular communication between parent and teacher, with the parents being encouraged to be actively involved with the child. The teacher, parent and child work together as a team, communicating progress and needs. Everyday she talked with me and sent notes--went over what they did.” “Progress reports were provided in the middle and at the end of the tutoring. Parents felt that any concerns they
had regarding their children were addressed.” Contrary to these opinions, Franklin parents reported, “There were limited contact and communication, but felt comfortable expressing any needs or concerns and those would be addressed.” They also noted, “There was regular contact with the school but felt that the tutor and the teacher needed to have better communication with one another.” This reflects the teacher interviews and supports the conclusion that SES at Franklin Elementary School lacked effective communication. Another area of weakness was communicating parental options to parents. “Yes, better announcement of program. I filled out the forms and it took a long time to find out what was happening. I could have found someone else to help him during that time and he would have been better off. I know of a lot of parents that had no idea what the program was or even that their children could get it.”

Some parents reported noticeable improvement in their child’s work and test scores. One parent stated, “There was definite improvement in the scores and the individual attention worked well.” Another said, “The child had been one year behind and was able to catch up with his grade. Yes, he actually passed his test. He was so happy he passed so he could on to the fourth grade.” Indicators of improvement included homework, grades, and test scores. Another parent noted, “I could tell by her homework assignments and her attitude toward math. I saw a lot of improvement in her reading. She went from where I had to help her a lot to doing it on her own.” The degree of improvement varied according to student. Where parents report a considerable amount of improvement, “She was flunking and now she is passing everything.” To a more moderate degree, “There were definite improvements made in reading and math skills, although not quite enough to pass proficiencies.” In addition to increased achievement,
parents indicated higher levels of self-esteem and better attitudes toward school. “She could read better and her attitude improved. It improved her self-esteem.” A main goal of SES is to increase academic achievement in the areas of reading and math. Parent interviews suggest a moderate to large effect in academic improvement.

There was a general consensus that SES was a helpful and convenient source for improving students’ academic achievement. Most parents hoped that the service could be longer. “It would help to have tutoring through the whole year rather than only 8 weeks in preparation for proficiencies. Tutoring the whole school year would provide the necessary assistance to continue strengthening the improvement made.” Another weakness was that “the service was limited to reading and math. It would be better to offer more subjects or a more general service. Some of these children need more than just reading and math.” Parents were appreciative of the program and found “it worthwhile for the children to have.”

*Question Five*

In what way do SES classroom observations contribute to the differences in these perceptions?

Three on-site visits were made by the UA evaluation team to observe tutoring sessions and to meet with the principals, tutors, and students. During the site visit, the researchers recorded the methods and instructional practices used by tutors while delivering services to SES students. The observation journals are included in Appendix I and provide a detailed account of each site visit.
Franklin Elementary Site Observation. The researcher went to Franklin Elementary School where the tutoring service was implemented. One tutor was assigned to teach nine students from five different grade levels in both reading and math. Students were given a math quiz to begin class. After collecting the quizzes, the tutor provided a snack for the students followed by a bathroom break. She orally questioned students with math problems in the areas of addition, money, and fractions. Six students were directed to complete worksheets or play nonacademic computer games on their own while the tutor worked with three students on mental math at another table. During this time two students played video basketball (games) on the computers in the classroom.

There was not much individual accountability in learning and academic achievement. A seventh grade student worked alone on a math worksheet. After several minutes, he reached an answer to a multiplication problem: $6 \times 8 = 47$. The tutor who was working with other students did not provide feedback or direction to this student. In fact, this student received no one-on-one instruction for the 1½ hour observation. Because he was quiet and working on his worksheet, he was never been approached by the tutor. While the other students played video games, this student who had difficulty with the task given to him remained in his seat and continued to struggle. From the observation, it was noticeable that the session was not well organized. The tutor-to-student ratio did not allow for one-on-one interaction, which SES students need.

Jefferson Elementary Site Visit. The evaluation team conducted a site visit to Jefferson Elementary School. The purpose was to observe SES in session as well as meet with key personnel who included the building principal, SES administrators, and three building facilitators.
Since the initial stages of the program tremendous growth has been documented; increasing in the number of schools served in the district as well as number of students. Last year, the program served 12 schools while this year that number has increased to 17. The number of students enrolled in the program increased from 264 in 2005-06 to 699 in 2006-07.

According to staff, the program runs smoothly with very few, if any, glitches. This is attributed to the established working relationships and communication between building principals, facilitators, classroom teachers, tutors, and building representatives. The SES program has successfully involved teachers, tutors, principals, and staff in the program.

The principal in each building led this effort by communicating with their teachers and staff regarding SES plans, procedures, and updates; they also communicate regularly with parents. For example, if there is a question regarding attendance, the tutor will speak with the principal who will call the parents. During the visit the principal waited in the cafeteria with students until the tutors arrived. He was knowledgeable about the program, schedule and greeted each tutor by name.

The SES program is very systematic and is aligned to academic content standards. It is clear that great effort has been made to be certain the program compliments and reinforces what is being taught in the regular classroom. Each tutor receives 12 hours of training in reading or math research prior to tutoring. The tutors are also coached by the reading or math academy literacy specialists throughout the entire cycle. The facilitators were made available to the tutors at the onset of the session. (Facilitators visit the sites
on a regular basis but due to the number of schools they are not able to be at each school every time.)

Finally, it was evident that continuous improvement is an overarching goal. The SES program uses data to evaluate the program and to make improvements. Changes made for this year include longer sessions (two 12-week sessions), the inclusion of OAT test questions and rubrics, an intensified focus on problem solving and vocabulary as well as modifications in instructional practices and learning strategies.

*Time for Tutoring.* As the school bell rang, signaling the end of the school day, students began to fill the cafeteria sitting in designated areas by group. One by one the tutors arrived; they were greeted by the SES program facilitators who handed them letters to send home with the students. The letters contained information about parent-tutor conferences. After gathering the letters and briefly chatting with the program facilitators, the tutors collected their students and headed off down the hallway to their classrooms. The researcher went in to observe a kindergarten and first grade class.

The ratio of students to tutor was 6:1. The classroom was very colorful with every corner of the room assigned a specific teaching purpose. The students sat on lines that were drawn on the floor with colored tape. The tutor read *Try, Try Again* to the students while asking comprehension questions such as, What else could he do? What is the problem? What should Robert do next? The students raised their hands and answered questions. All the children wanted to participate and the teacher made sure that every child was called on and involved. The students were also asked to make animal sounds along with the book. They did this on cue and in the correct places. This involved listening to what was happening in order to know what sound to make. At the
end of the story, the teacher reviewed the sequence of events by asking the children questions like, what happened next? The teacher asked, “Why are they smiling?” and conclusions were drawn by the students.

Next, the children moved to a horseshoe table with the teacher in the center. Each student was given a sound worksheet. The students went around the worksheet (which looked like a map of letters) saying each sound and then went around again stating each letter. The teacher was able to assess each student because of the close proximity and the seating arrangement. A basket was then passed around that contained small (1 inch) slinkies. Each child chose a slinky. Reading from another paper a student stretched the slinky and said words slowly such as “f-a-s-t” and then collapsing the slinky and then putting the word together saying “fast.” Not only did the students enjoy this activity, but it provided a very useful tool that demonstrated how to put the sounds together to make a word. Each student was able to master the words on the list with this activity. The only aspect of early reading not observed was correct articulation. Students were not instructed in placement of the tongue, teeth, and lips and consequently clarity of speech was not optimal.

Next the researcher observed a second grade math class. The ratio of students to tutor was 5:1 (three students were absent). Students were seated at desks with the tutor in a chair facing them. They each had a hundreds chart and blocks. The lesson focused on number sense. The students placed blocks on every second square starting with the number 15. Then they counted by twos and were asked what they noticed. Once student said, “They are all odd numbers.” The tutor then introduced a set of number cards from 100-200 and asked the students to take them and move to the floor putting them in order.
One student, Tyler, was able to apply what he learned from working with the hundreds chart and looked at place values when he was sorting through the cards. The students were excited about learning and they were enthusiastic each time they noticed something about number relationships. The tutor encouraged the students while pointing out different ways of looking at the numbers. “Look for patterns.” “Yes you can look at the ones place.”

_Franklin versus Jefferson._ The differences between the two sites are vast. The Jefferson tutor-to-student ratio was lower than Franklin. A low student-teacher ratio ensures immediate and individual access to instruction. Students receive the personal attention they need to achieve grade level standards. Students at Franklin would receive less instruction time and less personal attention than students at Jefferson. The Jefferson tutors specialized in one content area, either math or reading, and taught one to two grade levels; the Franklin tutors taught both with larger grade spans. At Franklin, the tutor’s focus is unnecessarily complicated due to the increased burden of teaching math and reading to three or more grade levels at one time. This reduces the personal attention each student receives even more. The communication was more organized and frequent at Jefferson than Franklin. Communication helps support the teachers, tutors, students, administrators, and parents. Without a communication system in place, tutors may find themselves without direction, consequently the program goals may suffer. Finally, the instructional methods employed varied. At both locations tutors favored a small group approach but the program at Jefferson was organized. The Jefferson administrators had developed an approach to tutoring that outlined goals and objectives, instructional methods, resources and materials, lesson plans, etc. The program was developed by math
and reading content specialists and tutors were trained in delivery. This approach to program implementation may garner a more systematic approach and a design that can be easily replicated site to site and produce similar results.

Summary

In summary, the results of this study indicate statistically significant increase in student academic achievement in the content areas of reading and math. Furthermore, survey responses indicate noticeable improvement in student achievement, attitude toward school, and self-esteem. Factors that strengthened outcomes were communication – tutor to parent, staff training, and student assessment. Areas of weakness were communication – tutor to teacher, instructional practice, tutor to student ratio, and grade level grouping.
This research study investigated the effects of SES on student outcomes. A secondary focus evaluated the strengths and weaknesses of specific program services, and offers findings concerning their contribution to student outcomes. Since SES, a sanction under NCLB, is a newly implemented program, the effects are relatively unknown. The results of this study can be used to evaluate impact and direction for program development. This may, in turn, influence the instructional design of future SES programs and program evaluation. Whenever policymakers put into practice a new law that reforms educational practice, a plan should be in place to keep track of the impact and value of that change. By identifying areas of strength and weakness, formative evaluation can be used to improve program implementation and design. Similarly, summative evaluation can be used to determine whether the program was worthwhile or not. The findings revealed in this study offer insights into the value of SES as a federal policy.

Data were collected ex post facto from two district SES providers. Learning gains on academic assessments for reading and mathematics, pretest and posttest scores for mathematics, survey responses, and observations produced from 2004-2007 were used in this investigation. The SES District Provider Evaluation Project results were made
available to the investigator for research purposes. The evaluation consisted of eight samples which were representative of SES students in Ohio. SES were offered in-house school districts functioning as providers. An evaluation of initial group differences was not necessary due to student eligibility for SES. Only students from Title I eligible, high poverty, and underachieving schools were eligible. The sample was determined to be a homogenous group consisting of high poverty, low achieving, and minority students and was consistent with national findings on demographics of SES participants (U.S. Department of Education, 2005e, 2004b).

To identify all possible studies of the relationships between student achievement and participation in SES, two meta-analyses were conducted to estimate the correlations among reading, math, and SES participation. Due to the disproportionate nature of the sample sizes, the samples were weighted. For each sample, effect size, correlation coefficient \( r \), and confidence intervals were calculated. Using the \( r^1 \), combined effect sizes were calculated. A standard measure of probability was found using z-scores. The researcher examined the heterogeneity of the studies by distributing Q statistics in a Chi-square. Next the researcher examined the heterogeneity of the ES by equating the Fisher’s transformed \( r \) scores (\( r' \)) of the studies to determine whether or not they were significantly different. The researcher then tested the heterogeneity of probabilities and calculated the confidence intervals. Finally, the researcher computed the Fail-safe N.

A multiple regression was used to find out what combination of variables on the parent and teacher surveys best predicted student learning gains in reading and math. Survey questions were aligned with SES provider standards by design. The frequency of responses for each question was input under the associated provider standard. In this
manner, the variables on the parent and teacher surveys were converted to their respective SES provider standard.

Qualitative data were collected from parent and teacher interviews and observations. The researcher examined the transcripts to determine how the data aligned with the quantitative findings. The strengths and weaknesses of provider practice were compared with student achievement.

The specific research hypotheses were:

1. There is a positive relationship between student participation in Supplemental Educational Services and increased student achievement.

2. There is a statistically significant relationship between the standards, included in the parent survey, in predicting student learning gains in reading and math.

Qualitative data were also collected concerning the perceptions of teachers and parents with regard to program outcomes and efficacy and classroom observations were conducted to further triangulate the data.

Conclusions

This study yielded relevant and applicable findings regarding student participation in SES, student achievement, and provider practices. This section will be divided so that the first statements will be related to the general research hypotheses, followed by specific research hypotheses, and concluded with a general discussion of all the specific research hypotheses.

Quantitative Information

Conclusions related to general research hypotheses one and the two corresponding specific research hypotheses follow. The subject of these hypotheses was the relationship between student achievement gains and student participation in SES. A meta-analysis
was conducted to investigate the relationship between student achievement gains in reading and participation in SES. Six studies were used in the meta-analysis, with a total of 395 participants. An $x^2$ was conducted to determine the heterogeneity of effect sizes. The results were $x^2 = 12.67$ which is statistically significant. The samples were determined to be heterogeneous. The cause was most likely the difference in sample sizes. The researcher was aware of the potential for a Type I error. The combined weighted effect size was $r = 0.48$, which Cohen (1992) considers to be a medium effect. It is improbable the results are due to chance. It would have required an additional 812 nonsignificant studies to render the meta-analysis nonsignificant. The file drawer problem does not affect this study because only 40 additional nonsignificant studies are likely to exist. The CI range is -0.38 to 0.58 which crosses over from negative to positive values. Therefore, there exists the possibility that the effect size is equal to zero, and the results must be interpreted with caution.

A meta-analysis was conducted to investigate the student achievement gains in math experienced by students who participated in SES. Two studies were used in the meta-analysis, with a total of 136 participants. An $x^2$ was conducted to determine the heterogeneity of effect sizes. The results were $x^2 = 0.15$ which indicates the studies were homogeneous. The combined weighted effect size was $r = 0.04$, which Cohen (1992) considers to be a statistically insignificant. This may be in effect a Type II error and due to the paucity of samples to compare in the meta-analysis. The two samples had different outcomes. The $t$ test for dependent means revealed the sample with seven participants had a positive outcome while the larger sample with 119 participants had a negative outcome. The meta-analysis was affected by weighting the sample with the negative
outcome more heavily. Another factor that may have contributed to the insignificant finding in math is that there are more teaching and learning strategies in math than in reading. This may be an area of focus for future research.

The first hypotheses investigated the effects of student participation in SES on student learning outcomes. Although there were statistically significant findings in reading, the range of confidence intervals poses the question whether real differences between increased student achievement and SES participation exist. Out of the eight samples, five were considerably small and this factor may contribute to a Type I error. However, the independent samples’ paired $t$ tests showed that participation in SES may influence the student learning outcomes as measured by pre- and post-test scores. Furthermore, data do not distinguish between regular academic growth and the increase in achievement due to SES treatment. The pre- and post-tests were administered by the provider at the beginning and end of the provider session. While the SES sessions occurred simultaneously with the academic school year, they were not held year-long and were only a portion of the actual school year. The duration of Jefferson session for 2005-06 was 6 weeks and for that reason, the pre- and post-test scores are relatively accurate measures of SES impact. Therefore, student participation in SES did influence student learning outcomes as measured by increased student achievement.

*Research Hypothesis Two*

Although the analysis was limited by variability in that only two providers were used, a stepwise multiple regression was conducted to determine the predictability of SES provider standards identified by a survey in regard to effect sizes. The reason for conducting the multiple regression was to determine the effect provider practices had on
achievement. Similar research had been conducted in a study conducted by the Chicago Public Schools where provider comparisons were made. The foundation for the multiple regression is weak at best. Two providers were used in the stepwise regression, with a combined total of 68 parent surveys. Results suggest that the two SES provider standards, student achievement, and provider assurances account for 16.6% of accounted variance in provider effect sizes related to student achievement. Communication was not found to be a predictor of effect sizes. Because the Jefferson’ sample consisted of 35 participants and the Franklin’ sample consisted of 33 participants, the sample sizes were considered evenly distributed. The survey responses used in this study originated from the 2005-06 school year. For the reason that the study was limited to two providers and one school year the power of the statistical test may have been weakened therefore, contributed to a Type II error. Furthermore, the condition of linearity and multicollinearity compromised the results of the statistical test.

As part of SES provider approval by the state department, provider practices must incorporate the standards outlined on the survey. Logically, compliance would make the two SES providers similar and therefore less likely to demonstrate differences on the parent survey. Communication was not a statistically significant factor in student learning gains. The multiple regression findings are insignificant due to the lack of variability between subjects. Further study in this area of provider practice and learning gains should make certain that data collection links student achievement scores with providers and surveys. It is also suggested that data be collected from more than two district providers.
Qualitative Information

The next section consists of the findings from the qualitative portion of the study. This section describes the various ways the research questions have been answered by administrative, teacher, and parent interview.

Research Question Three

The third research question examined the ways administrators and teachers report their attitudes toward SES and the factors that contribute to those differences. Interviews were held with five administrators and six teachers originating from two district providers. There were seven open-ended interview questions. The administrators easily described the SES programs in detail. One example of an administrator response is,

We offer a series of four sessions of training for teachers at the beginning of each session. We provide materials, paperwork, they need. We visit them a few times each week during a session to check in, monitor attendance, parent conference is being held, materials are sufficient, and make sure newsletters are going out etc. A teacher is always welcome to go through the training sessions again to refresh. The tutor does a pre- and post-assessment. They also assess as they go along. We have noted great improvement in computation and some children are noted as needing further assistance.

Conversely, the teachers reported having very little knowledge of the program. As stated by one teacher, “I have no idea about the program. We are not made aware of how it takes place.” In large urban districts with so many areas in need and an assortment of supplemental programs, standard communication is problematic. To further complicate the issue, SES is virtually unknown, sanctioned by an outside source, and packaged in a variety of ways. A district that shares the goals for SES, outlines the program, and enlists the stakeholders’ support will realize greater results than the district that does not communicate with its’ stakeholders. Communication calls for connecting tutors and
teachers from different subject areas and students to impending academic goals. Purpose without communication may result in inefficiency, frustration, and lack of trust.

Interviewees were asked what they felt were the strengths and weaknesses of the district SES programs. Stated by an administrator, “The strengths are we have highly qualified teachers tutoring. The class size is small. The types of reports attendance and progress, lesson plans . . . it is well documented.” Teachers felt the greatest weakness was disconnection from classroom activity and student learning goals. One teacher said, “Any tutoring is beneficial. But we are not connected. There is no continuation of skills from classroom to after school tutoring.” One tragic result of poor program goal communication is the disconnect between tutor and teacher. A main component of tutoring is a carefully developed learning plan, individualized to focus on weak areas. A skills assessment identifies the specific skill areas in which each student is experiencing difficulty. By constant review of goals and objectives a tutor can closely track the student's progress. Teachers are in a prime position to identify students in need of academic assistance. They can connect students to the necessary educational intervention such as SES and offer valuable information about student performance and areas of weakness. Strategies that target students’ needs will be effective at producing positive student outcomes. As a result of the teacher and tutor working together concepts can be approached in different ways and contexts, and goals and objectives reinforced.

Within this study, an increasing body of evidence has emerged which describes the important role communication plays in promoting and reinforcing new programs, and which urges administrators to develop a coordinated approach. A critical part of any program initiative is the communication and establishment of clear and consistent
information about the program. The most effective communication campaigns are those that involve the classroom teacher in the process. For example, classroom teachers’ could/might hand out and review information on SES at parent-teacher conferences. Communication is an exchange, not just a give, as all parties must participate to complete the information exchange. Several district administrators knew the importance of communication and built it into program design. Described by one administrator, “Communications with the parents involve regular progress reports and personal communication up to two times per week.” And, “There is a parent conference at the end of each session. We provide weekly newsletters for the parents that are very detailed in what we are doing.” Clearly this demonstrates an effort to communicate with parents. However, what about communication with classroom teachers? Most teachers reported no communication with tutors and did not feel it was convenient for them to talk to someone if they had concerns or questions regarding SES. Listening to what classroom teachers have to say about their students should be a priority. The wealth of information classroom teachers have to offer SES is incalculable. When efforts are uncoordinated the services are less effective.

Overall the administrative and teacher interviews indicate increased student achievement and stipulate the importance of communication -- communication not only between the tutor and parent but also the tutor and teacher. Many teachers were not aware of the program or that they had students in the program. With improvement in this area, tutoring can be planned to support the student in all facets of their educational lives. The NCLB mandates annual testing in reading and math which has narrowed the school curriculum and focus of SES. Tutoring can be an effective instructional strategy used to
meet different student needs in many content areas, including study skills, writing, and foreign language. The teacher and tutor can coordinate instructional plans for students who are struggling and achieve beneficial results.

Research Question Four

The fourth research question examined the ways parents reported their attitudes toward SES and the factors that contributed to those differences. Interviews were held with one hundred thirty nine derived from two district providers. There were seven open-ended interview questions (the same used in the teacher interviews).

Most parents felt the SES program worked for their children. When asked to describe the program and how it worked for them, one parent answered, “The program was during school for 2-3 hours per day one to two times per day in small groups, focusing primarily on reading and writing skills throughout the entire school year.” Parents indicated that they could tell the program worked because their student’s grades improved and their child did not need as much help with their homework as they had before their participation in SES.

Parents were asked what they felt were the strengths and weaknesses of the district SES programs. One parent stated, “The tutoring program was the only thing that was working for her and she just had it in the fall. If it would have been all year maybe she would be different.” The sentiment regarding longer SES session was repeated by many of the parents that were interviewed. Most parents indicated their children needed ongoing assistance throughout the school year. This is one area for program administrators to consider.
As previously noted, communication has been a recurring theme in this study. As reported by one parent, “There was regular contact with the school but felt that the tutor and the teacher needed to have better communication with one another.” This aligns with previous data which point out communication between tutor and parent and tutor and teacher are essential to build an organizational support system for the student. Overall parents felt there was progress made in the subjects tutored and were thankful the program was made available for their children.

*Research Question Five*

The fifth research question used SES classroom observations to determine what factors contributed to differences in perceptions. Three on-site visits were made by the UA evaluation team to observe tutoring sessions. During the site visit, the evaluator observed tutors delivering services to SES students and kept a journal of what they saw.

In review of the observation journals, the researcher has noted several key themes that are used by effective SES programs. The first is low tutor-to-student ratio and classes that focus on one content area. By keeping the number of students down and focusing on one subject, students receive more direct time with the tutor. The second factor is tutor training. The district programs with the highest learning gains and participation growth had instituted training programs prior to tutoring. In one district, each tutor receives 12 hours of training in reading or math research prior to tutoring and have access to mentoring by the reading or math academy literacy specialists. The third factor is a systematic approach. SES programs must be aligned to academic content standards but more importantly they must use research driven instructional methods proven to enhance student outcomes. Lastly, continuous improvement is another
important goal. Program administrators that make changes based on data and evaluation continue to increase performance. Some of the changes made by the SES programs that were observed included longer sessions, the inclusion of OAT test questions and rubrics, an intensified focus on problem solving and vocabulary, and modifications in instructional practices and learning strategies.

Implications

This section contains the implications of the research. The focus of this study was to investigate the effects of SES on student learning and achievement outcomes and to identify areas of strength and weakness in program implementation. Based on a review of the literature, which included a review of “best practices” for SES implementation, and assistance from experts in the field, the hypotheses for this study were defined. Results of the investigation showed that student participation in SES did account for overall learning gains in reading. To investigate the practical application of the effect, the researcher used the combined r for the z score. In reading the z score is 0.48. The z score would place a student, who prior to SES treatment was at the 50%, somewhat less than 1/2 standard deviation above the mean in reading.

According to Danielson (1996), educational practice is plagued with attempts to develop specific approaches and constraints to teaching that assume the approach will be effective in any setting and for all types of students. The observations at one site demonstrated a very systematic approach that was proven effective. In this site all program structures (e.g., small class size, time on specific tasks, and instructional components) were consistent and content focus varied according to student need.
According to the U.S. Department of Education (2005), participants in SES are predominantly from low-income families, high poverty schools, rank in the lower percentile on statewide assessments, and many are minority students. Why are the students that are eligible for SES a homogenous group? Possibly the answer is our schools are failing these types of students. Schools have an obligation to teach all students. It is important to recognize that in a democracy no one and no cultural group should be marginalized and not all students learn in the same manner (Irvine, 1995). SES may be more suitable for this student demographic. Students spend approximately 6 hours, 180 days of the year in school. For these types of students, often this time is spent with little to show for it. The successes of SES programs should be examined and viable elements should be introduced into the regular classroom to assist this student demographic. Investigating the variables associated with SES may provide data regarding the elements associated with academic gains. For example, if a lower student-to-teacher ratio in math is found to be a predictor of math learning gains, a school district may choose to incorporate breakout math classes for their students who are falling behind. In many districts, gifted children are sent to breakout classrooms for math or reading. These classes often have smaller teacher-to-student ratios. Offering the same type of program for remedial students may have the same effects as SES with the benefits of funding remaining within the school and the students “school day” not being extended.

Suggestions for Future Research

In conducting this study, many unanswered questions arose that could serve as the catalyst for future research. The following section describes some of the suggested areas the researcher feels are of value.
Data do not distinguish between regular academic growth and the increase in achievement due to SES treatment. It is suggested that test scores are collected at the beginning and end of the school year for schools in improvement status. Learning gains could be compared with schools in first year with those who do not participate in SES with those that do participate in SES providing an experimental group. Another measure would be AYP. By measuring the AYP of students who participate in SES with those who do not participate, one would have a more accurate measure. As it stands now, the numbers reflect regular academic growth with SES treatment. Without more accurate measures, we can only suggest what the effectiveness of NCLB policies might be but we cannot be certain. Gains may be caused by other factors such as new technology, professional development, or a new math series.

An obvious area of weakness is the NCLB policy initiated a plan without specifications for useful data collection. It is imperative that new programs are evaluated as to their effectiveness in order to support continuation. Without proper data collection efforts in all states, the proficiency and effectiveness of the SES sanction remains undetermined. Furthermore, the data collected should reflect the primary objectives of NCLB which are to make certain all children have a fair and equal opportunity to attain a high-quality education and reach the minimum level of proficiency on state standards and assessments (U.S. Department of Education, 2003). The two sanctions placed on underperforming schools are school choice and SES. Data collection is essential to determining the impact of these sanctions on struggling schools and must be uniform and meaningful. Increased student achievement of subgroups within the overall student population is a specific goal of NCLB. It would be interesting and useful to investigate
the gains made within racial groups, learning disabled populations, and students with limited English proficiency. Knowing the gains subgroups of the population have made since the onset of NCLB will provide information about achievement gains and where more effort needs to be focused.

Because children are so different from one another with different needs, a balance needs to be found between meeting the basic needs and ensuring that special needs children or disadvantaged children receive the opportunities they need. Are children better off having received SES? That question needs further analysis in order to justify the cost to public schools and the redirecting of Title I funding. Since the program is relatively new and there have been reported difficulties in implementation during the first 2 years, the researcher suggests further investigation regarding the impact of SES on both mathematics and reading scores in a longitudinal study. The study should examine learning gains in both reading and mathematics across grades K-12 in an effort to determine the point of most dramatic affect on student achievement as well as long-term gain.

The start up of SES in many districts was met with confusion and unpreparedness. This was a new territory with little guidance and schools struggled. Schools can offer SES by means of an “in-house” district program or through links to outside tutoring services in the community. We have also seen the demise of public school administration of SES and the exodus to outside providers. While this study only looked at “in-house” district providers, what are the odds that external providers are better equipped to address the same deficiencies? If one is interested in “best practices” of SES Providers and students’ learning gains within the guidelines of NCLB, the studies summarized in
Chapter II suggest that it is important to examine the variables of implementation and practice. It might be prudent to determine the differences between providers. One accessible method is to use the provider scores taken from the effectiveness reports and compare survey responses from parents and teachers. Observation would be a useful method of triangulating data.

SES enrollment is widely dispersed amongst various providers rendering a large sample of students with one provider a small feat. Comparing a larger sample and different providers would give a more complete picture of the impact. A larger sample would assist in determining the affect of certain variables on learning outcomes specifically racial groups, learning disabled, and students with limited English proficiency.

Summary

Chapter V began with a summary of the purpose and restatement of the problem. It was found that student participation in SES had a positive effect of student outcomes. The meta-analysis provided evidence that SES has the potential to affect student learning outcomes in both reading and math if implemented according to the provider standards outlined by ODE. The effect sizes indicated that participation in SES may produce a medium effect on learning outcomes, especially in the content area, reading. The small effect in math may be due to the small number of samples and small sample size.

Learning gains were compared to parent survey responses and indicated that communication was a main element in increased student achievement. This finding was replicated in the qualitative analysis of administrative, teacher, and parent surveys. Classroom observations supported the premise for tutoring to increase student
achievement by students having more one-on-one access with teachers. What may be needed is the integration of formative evaluation with continued improvement, maximizing the most effective use of this program. With the increased demand for accountability, it is important to investigate this sanction further to leverage its benefit to student learning outcomes.

This study has added to the knowledge base by showing that SES treatment does in fact increase student achievement. However, this study demonstrated that the effects are tied to provider practices and implementation. Communication was found to be critical to success. To improve effectiveness, SES providers must follow the standards of implementation and best practices. This will encourage interaction between parents, teachers, and tutors to develop a true support system for learners.
REFERENCES


Sunderman, G. L., & Kim, J. (2004). Increasing bureaucracy or increasing opportunities? School district experience with supplemental educational services. The Civil Rights Project Harvard University.


APPENDICES
APPENDIX A

IRB APPROVAL LETTER

The University of Akron

[Signature]

[Date]

[Title]

[Name]

[Institution]

[Address]

[City, State, Zip]

[Phone]

[Email]

[Notes or Comments]

[Attachment: Approval number form attached]

[Office of Research Services and Sponsored Programs]

[Address]

[Phone]

[Email]

[Notes or Comments]
APPENDIX B

PARENT COVER LETTER

Dear Teachers/Parents/Guardians

The University of Akron, College of Education is assisting the ODE by collecting data from you on the tutoring service your child/student is receiving. Enclosed is a survey asking you to rate the service. This will enable us to measure your level of satisfaction with the tutoring service.

The questionnaire will take about 5 minutes to complete. Of course, your participation is voluntary and anonymous. Your confidentiality will be ensured. Your information cannot be identified by anyone in your district or by the SES provider, and you may terminate your participation at any time if you are uncomfortable for any reason with the research process.

If you have additional questions and concerns, please contact the following individuals:

Dr. Xin Liang 330-972-6921
Mrs Jane Beese 330-972-6921
E-mail: liang@uakron.edu

Sincerely

Program Evaluator

Dr. Sharon Kruse (Professor & Associate Dean)

Dr. Xin Liang (Assistant Professor)

Mrs Jane Beese (Research Assistant)

-------------------------------------------------------------------------------------------------------------------------------------

PLEASE SIGN HERE AND RETURN THE SECTION BELOW THE DOTTED LINE WITH YOUR SURVEY

I would like to participate in the interview process. My Phone #:_________________
<table>
<thead>
<tr>
<th>Question</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>None of the Above</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The tutor reported to you about your child’s grade.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The tutor talked with you about your child.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The tutor talked with your child’s teachers about your child’s progress.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I saw improvement in my child’s grades.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I saw improvement in my child’s homework.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Your child’s feelings about school improved.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Your child attended the tutoring sessions regularly.
   - ) Agree
   - ) Not sure
   - ) Disagree
   - ) None of the above
8. Your child attended all the tutoring sessions.
   - ) Agree
   - ) Not sure
   - ) Disagree
   - ) None of the above
9. The tutoring services were provided as promised.
   - ) Agree
   - ) Not sure
   - ) Disagree
   - ) None of the above
10. The services were useful to you as a parent.
    - ) Agree
    - ) Not sure
    - ) Disagree
    - ) None of the above
11. The services were useful to your child.
    - ) Agree
    - ) Not sure
    - ) Disagree
    - ) None of the above
12. Your child enjoyed the tutoring time. It was usually not a struggle to get him/her to participate.
    - ) Agree
    - ) Not sure
    - ) Disagree
    - ) None of the above
13. It was easy to get answers from the tutor whenever you had questions.
    - ) Agree
    - ) Not sure
    - ) Disagree
    - ) None of the above
14. It was easy to get answers from the school teachers or principal whenever you had questions.
    - ) Agree
    - ) Not sure
    - ) Disagree
    - ) None of the above
15. If your child is eligible to receive services next year, you would probably choose the same tutor.
    - ) Agree
    - ) Not sure
    - ) Disagree
    - ) None of the above
Supplemental Educational Services 2005-2006 School Year

Teacher Questionnaire (Please fill out the form for each individual student)

Please write down the name of the service provider, and school district.

Name of the School District: ______________ Name of the Service Provider: ______________

How many students of yours received SES tutoring services during 05-06 school year? __________?

Please check one of the following choices with the statement

1. The tutor offered an instructional program for my students aligned with state academic standards.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above

2. The tutor offered you the opportunity to provide input and feedback on student academic goals for supplemental educational services.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above

3. The tutor offered evidence of student achievement and progress through shared assessment.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above

4. The tutor offered evidence of student achievement and progress through student educational plans.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above

5. The tutor offered on-going communication with you about student progress.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above

6. In your classroom, there was a positive change in the student’s grades.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above
7. In your classroom, you noticed a positive change concerning student homework completion.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above
8. In your classroom, you noticed a positive change concerning student performance on lessons.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above
9. In your classroom, you noticed your students' have experienced a positive change on state or district level testing.
   ( ) Agree
   ( ) Not sure
   ( ) Disagree
   ( ) None of the above
10. In your classroom, you noticed a positive change of student attitudes.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
11. In your classroom, you noticed a positive change concerning student attendance.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
12. Services were provided as promised.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
13. This program provided useful services to me as a classroom teacher.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
14. This program provided useful services to the students involved.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
15. It was usually not a struggle to get the student to participate in the tutoring program.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
16. It was easy to get answers from the tutor whenever I had questions.
    ( ) Agree
    ( ) Not sure
    ( ) Disagree
    ( ) None of the above
### APPENDIX E

**SES EFFECTIVENESS REPORT**

Supplemental Educational Services (SES) Effectiveness Report (ER)

School Year 2005-2006

Please note that this document is a sample and actual effectiveness reports are filled out online.

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Provider ID</th>
<th>Number of Students Served</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Achievement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Documentation supports a positive impact on school grades, homework completion or classroom teacher administered subject area assessments.</td>
<td>Clear &amp; Compelling Supporting Documentation/Evidence Some Supporting Documentation/Evidence Minimal Supporting Documentation/Evidence No Supporting Documentation/Evidence</td>
<td></td>
</tr>
<tr>
<td>3. Documentation supports evidence of improved outcomes, such as student attendance, retention/promotion rates, graduation rates and/or student discipline.</td>
<td>Clear &amp; Compelling Supporting Documentation/Evidence Some Supporting Documentation/Evidence Minimal Supporting Documentation/Evidence No Supporting Documentation/Evidence</td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Provider consistently performs contracted services.</td>
<td>Clear &amp; Compelling Supporting Documentation/Evidence</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some Supporting Documentation/Evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minimal Supporting Documentation/Evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Supporting Documentation/Evidence</td>
</tr>
<tr>
<td></td>
<td>2. Provider reports, to LEA, the number of students served by grade level.</td>
<td>Clear &amp; Compelling Supporting Documentation/Evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some Supporting Documentation/Evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minimal Supporting Documentation/Evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Supporting Documentation/Evidence</td>
</tr>
</tbody>
</table>
APPENDIX F

ADMINISTRATIVE INTERVIEWS

Administrator #1
- There are two different options provided for tutoring.
- There is lunchtime that is provided by retired teachers with a focus on math preparation for
  proficiencies. It lasts for three to four months. Each tutor works with two children at a time who
  had borderline pretest scores and would be able to pass with some additional help.
- The tutors provided notices of the progress that was being made and any special needs that would
  arise.
- All the children in this program passed their proficiencies.
- The second program was an after school program focusing on reading skills preparing for
  proficiencies and lasted about 5 weeks due to funding issues. The children selected for this
  program were those who had obtained less than 70% in the October reading proficiency pretest. All
  of them were very low functioning individuals.
- There was no communication from tutors with teachers or parents in this program.
- The children in this program did not pass the proficiencies.
- It was felt by this teacher that the money used for the after school program would have been better
  used if it would have focused on the children who were struggling but were not as low level
  functioning as the individuals that were focused upon.

Administrator #2
- The program is an after school program for grades 3-5 where the children are in groups of 2-5,
  focusing on math and reading. There is about 45 minutes of lessons, followed by 10 minute
  learning game.
- Communications with the parents involve regular progress reports and personal
  communication up to 2 times per week.
- Progress is seen in daily school activities with higher reading skills, better comprehension and
  improved writing skills.

Administrator #3
- The program offered is an after school academic tutoring program. The parents choose from
  several providers available, focusing on math and reading. The ability for the parents to choose a
  provider is greatly appreciated as it gives the parents choice and control.
- Most of the providers last for 8 weeks and focus on preparation for proficiencies. Groups are
  broken down into grade levels for most of the providers, unless there are particularly small groups
  and then the groups are broken down into K-3 and 4-6.
- Each student is challenged to develop skills a lot beyond what they have been developing in the
  classroom setting.
- Progress reports are sent monthly and there are periodic open houses to allow parents to
  speak directly with the tutors if desired.

Administrator #4
- The program is an after school program that provides proficiency-based activities.
- Groups are broken down by grade level.
- Progress reports are sent to parents every two weeks.
- Tests that were sent home were more diagnostic testing and it is believed that proficiency testing
  may have been more beneficial.
- Believe it is a really great program. The children love it as they receive more individual help with
  their questions directly addressed. They receive a lot of personal attention.

Administrator #5
- Times the classroom teacher is not the tutor.
Administrator # 5

- We offer a series of 4 sessions of training for teachers at the beginning of each session. We provide materials, paperwork, they need. We visit them a few times each week during a session to check in, monitor attendance, parent conference is being held, materials are sufficient, and make sure newsletters are going out etc. If a teacher is always welcome to go through the training sessions again to refresh. The tutor does a pre and post assessment. They also assess as they go along. We have noted great improvement in computation and some children are noted as needing further assistance.
- The tutor will call mid session to remind parents of their conference to confirm time. If the child is not attending the sessions the classroom teacher, tutor, and principal is calling the parent. A lot of times the classroom teacher is not the tutor.
- Yes, there is a carboned progress report. The parent sees it when they come to the conference. There is an area for a written response and for the tutor and parent to sign and a copy is given to the classroom teacher.
- Absolutely, we are constantly reassessing. The training sessions provide interaction and we also visit the sites. The parents can call the tutor or the school.
- The strengths are we have highly qualified teachers tutoring. The class size is small. Kids being able to come to and return home to the program has made it easy to attend. The types of reports attendance and progress, lesson planners...it is well documented.
- The biggest weakness is the ease that parents can sign up. In the provider booklet there are so many providers that it is confusing to the parents. The parents are notified they are eligible through Title I.
- I think for our program that word of mouth is a positive way for parents to hear of our program because it is very structured and the kids are engaged with the tutor and they really get the attention they need.

Administrator # 6

- We ran three sessions during the year at ten sites. It was held twice a week for 90 minutes. It was both reading and math. All tutors were highly qualified and were teachers within the district. They receive 12 hours of training in scientifically based reading or math research prior to tutoring. They are coached by the reading or math academy literacy specialists throughout the entire cycle.
- There is a pre and post test. Definitely there was a lot of progress made and the program is very well received. We are a literacy program and everything is hand picked and very uniform across the district.
- There is a parent conference at the end of each session. We provide weekly newsletters for the parents that are very detailed in what we are doing.
- We make copies of everything for the classroom teachers and parents. They are put in the homeroom teachers’ mailbox. A parent form goes home to parents.
- Yes, we have very good communication. We are accessible everyday and we make the rounds. The teachers are never left on their own.
- We are using highly qualified teachers. We know the research and stick to what works and what compliments what is happening in the classroom. The only weakness is we felt the program could be longer. We are planning on changing the sessions so they are longer.
- We are going to add a K and 1st grade. What we have seen is that successful is that our teachers are able to tutor our own children and that they are highly qualified and that they know what standards are. It is not a waste of time it is an intervention program that is highly scripted.

Administrator #7

- The program is an after-school tutoring program. In the math area we focus on building number sense, computation strategies, and problem solving. We focus a lot on ongoing assessment making sure we are cognizant of the content standards for each grade level, servicing students in grades K-8 with highly qualified and trained teachers. We have ongoing communication with home via parent newsletters and an end of session parent conference with the child’s tutor. The classroom teacher also receives a final progress report.
- We use a program called CCC which identifies skills the student had coming in and we look at the skills they have at the end. Basically the tutor assesses ongoing through vocabulary, games, etc. They start out building number sense by building patterns. The small group interaction helps the tutor see if the student is grasping the concepts or not. Observation is the best way.
The newsletters, the progress reports, and a lot of our tutors phone home; if they have a question or need to relay something to the parent.

The end of the session progress report is a written report it is broken down into the categories we assess. It shows whether the student has completed the course at satisfactory or not.

Absolutely, we are constantly reassessing. The training sessions provide interaction and we also visit the sites. The parents can call the tutor or the school.

The strengths is that teacher-student interaction, small group, the training is a definite strength. Providing the materials for the teachers. All of the materials we use in training is provided to the teacher tutors. They receive: Base Ten Blocks, Pattern Blocks, Tangrams, Literature, Handouts for lessons and games, Dice, Money, Number Cards, Number puzzles and charts, Number Lines, Algebra Tiles, Rulers, Beads/pipe cleaners, Tile Squares, Fraction representations, Paper/Pencils/Markers/Chart Paper, Games: "24"/Clutters and Ladders/Candy Land Array Frames, and Work Mats.

The communication between the parent and principal in the building. There is nothing better than that face-to-face contact. We had a first grade girl that was petrified of math and cried the first few weeks of tutoring and after a few weeks the teacher went to the tutor and said she gets it to the tutor.

The weakness is making sure the students stay. Rounding them up. There is that step before they meet in the cafeteria where a lot will go home.

Last year the parents wanted longer sessions so we went to two twelve week session and I longevity wise that makes a difference for the child to be able to work on those skills in a consistent manner. We modified our training and looked at data as a whole; so we incorporated OAT test questions and rubrics, we also keyed in on problem solving and vocabulary. I know for next round we will incorporate test taking strategies. We are always trying to improve. We are looking at our groups and honing in on what they need to be successful as they progress through the levels in math. For example, rational numbers is difficult for students so we pulled out materials and developed strategies that will concentrate on that.

By the end of this session somewhere near 730 students and this greatly increased from previous numbers.

Administrator # 8

The program was done in three session and we held 12 hours training for our teachers before the onset of the program. We covered the components for a balanced reading program.

We did informal testing with teacher feedback. We also used a structured CCC success maker assessment.

There is a newsletter and a lot of times the communication takes place on site when the parent picks the student up. There is a report card and parent conference.

The report cards.

Yes definitely I go to the site everyday. I am available to discuss any issues and also the building rep would call if anything came up.

The strengths are the lessons are planned, there is uniformity in the program no one is off doing their own thing and it is extremely well planned.

Three things that make it so successful are the lesson plans, training and follow-up support. These set our program apart from other programs.
APPENDIX G
CLASSROOM TEACHER INTERVIEWS

<table>
<thead>
<tr>
<th>Teacher #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I was given this survey to fill out. I’d like to know how I was selected on the list. I do not have any student involved in the program. I do not know anything about the program. They must have given you a wrong teacher list to send the survey out. “I’d question twice the accuracy of the findings of your survey.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>- <strong>There was no involvement on her part.</strong> To her knowledge the tutors sent the forms home to the parents.</td>
</tr>
<tr>
<td>- Yes, I could leave school a few minutes early if I needed to meet with the tutors.</td>
</tr>
<tr>
<td>- No.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I have been out on paternity leave for 2 months. I do not even know which of my students are in the program. I had many different subs so there is no one to contact.</td>
</tr>
<tr>
<td>- <strong>No idea how progress was made.</strong></td>
</tr>
<tr>
<td>- No communication.</td>
</tr>
<tr>
<td>- <strong>Teacher # 10</strong></td>
</tr>
<tr>
<td>- What students do I have that are in the program? She said she is not their teacher.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>- It is a good program but confusing because we don’t call it that. It is under some other name. I’m not even sure we are talking about the same program.</td>
</tr>
<tr>
<td>- Nathaniel’s confidence is up, his grades are up. He enjoys going to tutoring after school.</td>
</tr>
<tr>
<td>- No communication</td>
</tr>
<tr>
<td>- No written report</td>
</tr>
<tr>
<td>- Not convenient to talk to tutors</td>
</tr>
<tr>
<td>- Absolutely worthwhile. The more tutoring we can have the better. They really thrive one on one.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher #5</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I have no idea about the program. We are not made aware of how it takes place.</td>
</tr>
<tr>
<td>- Slight progress. I am his English as a second language teacher.</td>
</tr>
<tr>
<td>- No communication between tutor, teacher, parents</td>
</tr>
<tr>
<td>- No written report</td>
</tr>
<tr>
<td>- Not convenient if I had questions</td>
</tr>
<tr>
<td>- Any tutoring is beneficial. But we are not connected. There is no continuation of skills from classroom to after school tutoring.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher #6</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I have no idea about the program. We are not made aware of how it takes place.</td>
</tr>
<tr>
<td>- Slight progress. I am his English as a second language teacher.</td>
</tr>
<tr>
<td>- No communication between tutor, teacher, parents</td>
</tr>
<tr>
<td>- No written report</td>
</tr>
<tr>
<td>- Not convenient if I had questions</td>
</tr>
<tr>
<td>- Any tutoring is beneficial. But we are not connected. There is no continuation of skills from classroom to after school tutoring.</td>
</tr>
</tbody>
</table>
• Yes, through my son.
• No.

Parent #96
• It did not work.
• Her grade in math actually went down. I would never do it again.
• No and I don’t like him.
• No I did not.
• Not until the end.
• The weakness was the tutor.
• Find another 6th grade math tutor.

Parent #97
• It was fine.
• She is doing a lot better in all her work.
• We had a little yes.
• Yes I did.
• Yes, but I didn’t have any concerns.
• No weaknesses.
• It was set up pretty good. I think it worked pretty good.

Parent #98
• It worked actually a lot.
• He did better when he read books.
• Yes. We talked to the tutor when he was picked up.
• Yes at the conference.
• Not really.

Parent #99
• It worked well for her. She enjoyed it.
• Just the notes the teacher would send home about how she was doing in school.
• Yes.
• I received a couple of them.
• Yes.
• Yes it seemed like a good program.
• It’s a good program.

Parent #100
• It worked real well. Her reading improved tremendously. She went up several levels in reading.
• I read with her every night and I could see the progress.
• I go to school everyday and am very active with the school. I would see the tutor and talk with her when I picked them up.
• Yes.
• No I think the program was excellent. It is helping my nephew as well.
• It is tremendous what you are doing. It is really helping the kids.

Parent #101
• I think it was pretty good for him. It helped him a lot.
• It brought his grades up two grades.
• I spoke with them and told them that I would do what they needed me to do at home. I cut out a lot of his stuff at night. He just did his work.
• Yes, they send a weekly progress report home.
• Yes, I didn’t have any problems.
• A little, I thought it wasn’t giving him a lot of time that he needed, he liked it.
• I think the program has to be longer. It ended at the middle of the semester. It needs to be dealt with at the beginning of the year.

Parent #102 (limited English)
• I really don’t know.
• Couldn’t tell.
- I spoke with the teacher but didn’t understand.

Parent #103
- I think it needs to be a little bit more of one-on-one. They seem to get bored because they had already been there all day.
- I saw a little bit of progress. He seemed to be distracted by bad behavior of others in the class. They were all tired of being at school.
- I talked with her regularly. She thought he needed something more often and with shorter time periods, like everyday for ½ hour and more repetition.
- Yes one or two.
- Talked with the tutor.
- Not really.
- Back off of the long hours and make it more repetitive with shorter lengths of time. Kids don’t want to be at school all day and then for another hour and a half after...it’s too long.

Parent #104
- I think it helped her pretty good.
- Her reading picked up more better.
- No, I didn’t or anything but I did read a few notes.
- Yes, I do.
- Oh yes.
- No.
- No.

Parent #105
- It was great.
- She could read better and her attitude improved.
- No I haven’t.
- She did and it was good.
- Yes it was.
- No I really didn’t.
- I don’t think so.

Parent #106
- It seemed to work okay.
- By him doing his homework and he was reading a little bit better.
- No, I was unable to make the conference.
- No.
- I didn’t have any problems.
- No.
- No.

Parent #107
- It was good.
- He was reading a lot better than normally.
- Not much.
- Yes.
- Yes.
- Yes, I liked it and it helped him out with his reading.
- No.

Parent #108
- It was good. We liked it.
- His reading improved he could read faster, remember it more and understand it.
- Yes, I spoke with her on the phone.
- It is coming home today.
- Yes, I didn’t have any concerns.
- I didn’t notice weaknesses the strengths were that it was available and for free and right after school. I liked that it was right after school.
- It is a nice program.
Parent #109
- My kids were going for math and reading. My youngest was successful but not so sure about the other two.
- They sent home a report.
- My oldest daughter- I spoke with that tutor once or twice but not the others.
- Just one.
- Yes.
- Just lack of communication. I only got results from my youngest daughter. The oldest went from an A to an F. So there was a problem with that and I don’t think it helped her at all.
- What I have already said.

Parent #110
- He did do the program it but it didn’t help him. He can’t stay focused to do the work.
- No progress he needs other help.
- I spoke with the tutor and she wants him to be tested for other things.
- Yes.
- Yes.
- No.
- The program does work but he can’t stay focused. It was not for him.

Parent #111
- It worked pretty good for me.
- My son had a problem reading and now he is doing better.
- Yes I did.
- Yes I did
- I hadn’t any issues.
- Seemed like a good program to me.
- I like them to know the teachers in that program did a great job.

Parent #112
- Very good. I really liked it a lot. It helped her a lot.
- I was helping her at home and she was getting an F in reading. Her grade went up to a C with the tutoring.
- It was very good.
- No not yet.
- Yes.
- No not really.
- No nothing really.

Parent #113
- It was okay. Overall I can’t really comment because I didn’t see the tutoring session. It didn’t last an hour like they said, it was only 45 minutes.
- I can’t gauge whether it was him or the tutoring. He still has trouble like before.
- Yes, I spoke with them but he is going to be retained so overall it didn’t help.
- No.
- Yes.
- Not really.
- Just that there needs to be an agenda or plan of what each student will cover that is given to the parent so they can help at home. I would have liked to have a plan to follow.

Parent #114
- It worked out well it improved his reading.
- In his grades.
- I never spoke with the tutor.
- No.
- To the teacher. But I didn’t have any concerns.
- I think they could have kept in touch with us a little bit more with weekly reports and such.
- No not really.
Parent #115
- I think it was great.
- I think they are more interested in what they were learning, more attentive.
- They were available at any time.
- They are actually on the way home.
- Yes, very.
- Only that some of the material was pretty simple. It was real easy. I think it could have been more challenging.
- No Mam.

Parent #116
- It worked out really well for her.
- Yes I could see a lot of improvement in her reading. She reads a lot more at home.
- Yes.
- Yes we did.
- Yes.
- I didn’t notice any.
- We think that they did a really good job.

Parent #117
- Pretty good.
- Yes I saw improvement in their homework.
- Yes.
- Yes.
- Yes.
- No, they improved a whole lot since they have been going. They have brought their grades up.
- Keep doing what they are doing because I appreciate it.

Parent #118
- It worked very well.
- Yes.
- No.
- I will today at the conference.
- No.
- No.
- No.

Parent #119
- He’s still flunking. He thinks schools a game.
- The system is a mess because there is no consequence for messing around. When a child thinks its playtime- you are all screwed up. My opinion is if you think you know better than the parents good luck. Some of the foreign countries have kids that are smarter than hell. Why aren’t our kids doing the same? The tutoring, one-on-one time is not going to do anything. When I was in school we were punished when we didn’t listen. #@!! It hasn’t done anything for my son. Do you know what I think about your tutoring? It sucks.

Parent #120
- It wasn’t beneficial for my kids because they needed tutoring in both subjects and could only take one.
- No really.
- I talked with both the tutor and the teacher.
- Yes.
- Yes.
- Just what I said.
- Not really.
Parent #121
- I don’t know for sure.
- Yes I did.
- No I didn’t.
- No I didn’t.
- No.
- He did a lot better than he had been.

Parent #123
- I don’t know.
- Yes.
- No.
- No.
- Yes.
- No.
- No.

Parent #124
- It worked alright. She is still having some problems.
- I saw improvement on her reading. She will need more practice.
- No.
- Yes we have.
- Uh huh.
- She still has difficulty.
- I think they need to keep up the good job. It is very helpful.

Parent #125
- It worked out good.
- Kind of but not really.
- Not yet. I will be meeting with the tutor today.
- No.
- No.

Parent #126
- It was good.
- A little.
- No not really.
- No.
- Yes absolutely.
- No.
- Needs more help in reading.
- had it again I would put them in it again.

Parent #127
- It worked out very good. Their grades came up a lot.
- I see progress because they have grown a lot with their grades.
- No I really didn’t
- No from the tutor.
- Yes.
- I didn’t notice any weaknesses but the kids had a more positive outlook and were more interested in their work.

Parent #128
- My son loves it.
- He’s doing real good with his reading.
- No I haven’t met the tutor.
- None that I know of.
- I have no concerns but would talk to the principal.
• I have no concerns but would talk to the principal.
• No.
• Just offer the program so parents are more aware of them. The after-school programs could have a lot more kids in them. I don’t think parents know about them.
• I didn’t have a chance because of the time I get out of work.
• Not really. It was a good program and the kids really enjoyed it.

Parent #129
• It worked pretty good.
• Actually I’m not sure.
• Yes, my wife did.
• I’m not sure.
• Yes.
• Not right off hand.

Parent #130
• Okay. My oldest daughter was in the program and brought her grade up from a C to a B.
• Her teacher told me how much progress she was making in class.
• After school we would talk, if I was in the school we would talk. Any chance we had we discussed what was happening.
• Yes.
• Yes.
• I thought it was a great program. My daughter really enjoyed it.
• The only thing is I would like to see the program a little bit longer and I wish they could take both reading and math if that is what they need.

Parent #131
• My kids have accomplished what they were supposed to.
• Yes.
• Yes, I spoke with the two tutors and progress was made.
• Yes, I have one and one is being sent.
• Yes.
• No, but my kids go through this every year and they still have to go to summer school. I don’t understand that if they are getting out of the program what they are supposed to.

Parent #132
• It was fine.
• Yes, I saw progress with my children.
• I didn’t get a chance to speak with the tutor but I did speak with their teachers.
• Yes, when it was over and how they were doing.
• Yes.
• Transportation was difficult.
• I think they are doing a good job.

Parent #133
• I liked it. It helped my kids. I would recommend next year to other parents.
• They gave me a paper about the progress and sent notes home.
• Yes.
• Yes, I did.
• Yes it was.
• It helped my kids with what they needed. No weaknesses.
• No it was fine.

Parent #134
• It brought his grades up.
• He picks up a book and reads it without me telling him and he wouldn’t do that before. He can read on the state tests and the teachers say he comprehends what he is reading.
• I talked with his tutor everyday down there.
• No, but she came out and did a home visit.
• No.
• Keep it up, in case my younger ones need assistance.

Parent #135
• It was fine. It helped him. I liked that program for him.
• He would do him homework when he got home and I didn’t have to help.
• No I haven’t. But one tutor was his teacher so I knew them.
• No I haven’t.
• Yes because I knew them from before.
• No, it just helps them a lot. If they had it again I would put them in it again.

Parent #136
• It worked fine.
• I seen improvement in her math. She did good in math and comprehension was much better. Overall subjects she did better.
• Yes, I would talk to her maybe 3 or 4 times throughout. The tutor would call if she missed.
• Nothing yet.
• Yes.
• No but the current thing was her understanding and not having enough time in a classroom setting. The tutoring was a better place for her. It helped her grow in that area.
• Its helping the kids. The tutors really understand and help those kids. It takes that extra time and care from the tutors to help kids not feel like they are just stupid but that they just don’t know something and they are more open to learning. Parents are working and this is a good place for them to be.

Parent #137
• Great.
• We just got done with the assessment and they said they had seen a lot of progress. We can’t tell until they take the Ohio achievement test.
• Yes.
• We just did today.
• Never had any concerns.
• The thing about that was it ran so smoothly there were no problems. The teachers are really good and worked with the kids a lot and they addressed a lot.
• It was a really great program.

Parent #138
• It helped him out a lot.
• I think there would have been a whole lot more if we wouldn’t have had problems with his classroom teacher. I should have handled that in October.
• No, he didn’t let me see anything. If he thought he could be in trouble the notes would not have made it home anyway.
• I didn’t have any problems talking about the issues and concerns.
• No they really did a very good job. They helped him out a whole lot. It was very good for him.

Parent #139
• It worked out okay.
• No I didn’t see anything. The report was actually worse.
• Yes.
• Not until the end when she was finished.
• Yes, it was convenient.
• No.
• No.
APPENDIX I

OBSERVATION JOURNAL

XXX On-Site Visitation Report

Principal
- Eligible students are identified
- Parents are notified by direct mailer and through IVR; the districts automated phone system
- Student applications are accepted
- Tutor position is posted through district email
- Interview team, consisting of 4 members, considers applications.
  - Match expertise with students
  - Specifically match tutors with age of students. Specifically matching previous teaching experience with age of students to be tutored.

Schedule
- Program began the week of February 17, 2006 and will continue until June 1, 2006
- Tutor sessions are twice weekly from 2:30 pm until 4:30 pm.
  Enrollment
  - 9 students participate in the SES program at XXX with one tutor
  - There are 37 students district wide and 8 tutors
- The tutor was asked what she felt contributed to low enrollment in the program, she stated,
  - Poor communication to parents
  - How the information about the program is disseminated
  - It should be in the school newsletter and discussed at the monthly parent meetings
  - Flyers should be dispersed.

Assessment
- The Stanford and Ohio Achievement tests are given and data is made available
- Standards are used to assess strengths and weaknesses
- A district Literacy and mathematics matrix is used to align standards and pacing however;
  - The tutor did not use student records to develop academic plan for students.
  - Tutors develop and implement their own assessment methods
- The tutor reported speaking with classroom teachers biweekly
- The tutor writes an individual academic plan for each student
- The tutor sends weekly lesson plans home to parents.
- The tutor communicates biweekly via phone with parents on student progress
- Miscellaneous
  - The tutor felt supported by staff
  - No communication regarding the tardiness of the two students who arrived late
  - No communication regarding the absent students (total of 3)
  - No record keeping/attendance
  - Portfolios including assessments, I(A)Ps, and communication are kept by the tutor for each student
Classroom Observation
At 2:30 the tutor entered the classroom followed shortly after by four students.
- The students were given a mathematics quiz while the tutor spoke with us briefly about the program.
- The materials used for the tutoring program for math are the Simple solutions. All teaching is derived from this source.
- No indication of reading or materials was witnessed during this on-site visit.
- At 3:00 two additional students entered the room.
- The tutor then collected the quizzes and provided a snack and bathroom break for students.
- Approximately 3:10 pm the tutor worked with three of the students at one table and conducted a “mental math” session.
  - She orally gave mathematics problems in content area of addition, money, and fractions.
  - During this time two students played video basketball (games) on the computers in the classroom.
  - The seventh grade student was given a multiplication mathematics worksheet to complete. The student had difficulty with the worksheet but remained in his seat and continued to struggle with the task. Sample problem from the worksheet is $6 \times 8 =$. His answer was 47.

On-Site Visitation
May 3, 2006

XXX Academy:

We observed two students being tutored in mathematics only one was part of the SES program. The SES program was implemented at XXX Academy in December. He was an 8th grade student working on age appropriate math skills (factoring). He appeared to be reviewing the lesson from school that day while completing his homework assignment. The tutor was very skilled in math and exuded a high level of enthusiasm for working with these students. By the middle of the lesson both students showed competency/mastery of the concepts for that lesson and were able to move on independently.

We spoke with the reading tutor; who was highly qualified for the position. The tutor had 3 years teaching experience as an ESL teacher in the XXX Public school system. One student in 7th grade was part of the SES program began tutoring in December and was assessed at a 2nd grade reading level. The tutor used running records, spoke with her teachers and parents, as well as reviewed her school records. She implemented a reading program that she borrowed from the public school across the street. She established a 100 book challenge for her student and maintains regular communication with the father through phone calls. Weekly progress reports are sent by XXX Academy to the school weekly. The tutor expressed concern that the student was in need of a special education program and there was no evidence in her file of an IEP.

Site Visit Descriptions

Administrative Interview:
I met with XXX and three building facilitators. The XXX program has seen tremendous growth over the past four years, increasing the numbers of schools served as well as number of students. Everyone felt the program ran smoothly encountering very few problems. This being primarily due to the working relationships that have been established between building principals, facilitators, classroom teachers, tutors, and building representatives. The XXX staff is very familiar with the work of the facilitators and there is a high level of respect and trust.
Every year improvements have been made to the program. This year the session length was increased to 12 weeks. The number of snow days called by XXX Public School District created a problem. The time was made up by contacting parents and either increasing the time during regularly scheduled tutoring sessions or by scheduling additional tutoring sessions during the week. The only other issue faced by XXX is student attendance. Many of the tutors are already aware if students are sick because most of the tutors employed by XXX are classroom teachers. If there is a question regarding attendance the tutor will speak with the principal who will call the parents. From time to time the parents have withdrawn the student from the program without notifying the school.

School Day Ends & XXX Begins:

At the close of the school day students began to fill the cafeteria sitting in designated areas by group. One by one the tutors arrived; they were greeted by the facilitators who gave them letters for parent conferences to be held the following Monday. During this time, the facilitators were made available to the tutors. (Facilitators visit the sites on a regular basis but due to the number of schools they are not able to be at each school every time.)

Meanwhile the students were supervised by the building principal. He was aware of the schedule, greeted the tutors by name, knew about the conference schedule, and maintained control of the large number of students. The tutors then collected their students and went to separate classrooms throughout the building. The process takes approx. 15 minutes which provides the time several tutors need to travel from another building.

Kindergarten/First Grade Reading:

The ratio of students to tutor was 6:1. The tutor was the classroom teacher. The classroom was very colorful with every corner of the room assigned a specific teaching purpose. The students sat on lines that were drawn on the floor with colored tape. They were very well behaved and on task.

The tutor read Try, Try Again to the students while asking comprehension questions such as, What else could he do? What is the problem? What should Robert do next? The students raised their hands and answered questions. All the children wanted to participate and the teacher made sure that every child was called on and involved. The students were also asked to make animal sounds along with the book. They did this on cue and in the correct places. This involved listening to what was happening in order to know what sound to make. At the end of the story the teacher reviewed the sequence of events by asking the children questions like, what happened next? Finally conclusions were drawn, why are they smiling? The story was approximately 15 minutes in length.

The next activity was only observed in part. Children moved to a horseshoe table with the teacher in the center. Each student was given a sound worksheet. The students went around the worksheet (which looked like a map of letters) saying each sound and then went around again stating each letter. The teacher was able to assess each student due to the close proximity and do to the seating arrangement. A basket was then passed around that contained small (1 inch) slinkies. Each child chose a slinky. Reading from another paper student stretched the slinky and said words slowly such as “f-a-s-t” and then collapsing the slinky and then putting the word together saying “fast”. Not only did the students enjoy this activity but it provided a very useful tool that demonstrated how to put the sounds together to make a word. Each student was able to master the words on the list with this activity. The only aspect of early reading not observed was correct articulation. Students were not instructed in placement of the tongue, teeth, lips and consequently clarity of speech was not optimal.
Second Grade Math:

The ratio of students to tutor was 5:1 however, three students were absent. The student behavior was excellent. Students were seated at desks with the tutor in a chair facing them. They each had a hundreds chart and blocks. The portion of the lesson observed focused on number sense. The students placed blocks on every second square starting with the number 15. They then counted by 2’s and were asked what they noticed. Once student said, “They are all odd numbers.” The tutor then introduced a set of number cards from 100-200 and asked the students to take them and move to the floor putting them in order. One student, Tyler, was able to use the concepts learned from working with the hundreds chart to look at place values when he was sorting through the cards. The students were excited to learn and each time they noticed something about number relationships they were enthusiastic. The tutor encouraged the students while pointing out different ways of looking at the numbers. “Look for patterns.” “Yes you can look at the ones place.”

Second Grade Reading:

The student tutor ratio was 9:2. The students sat in desks in rows facing the blackboard with one tutor instructing from the board while the other walked around checking student work. Student behavior was very good and students were on task. The first activity observed was oral mastery drills. The tutor stated a word such as “teach” and then said take out “ch” and students raised their hands and were called on to answer “tea”. Other examples were “mister” take out “s” you get “mier”, “think” take out “n” you get “thick”. The students understood the activity and correctly answered each example. Vowel sounds that change when next to specific consonants were not considered in this drill, this made some of the words very difficult because you had to actually change the vowel sound for example think to thick. Each student had a turn to answer and all participated.

The next activity involved small sets of alphabet cards for each student and a pocket chart for the tutor. The tutors switched places and the one at the board would spell a word in the pocket e.g. “cop” the students would follow at their desk. The tutor asked, “what word is this?” The students replied, “Cop”. The tutor added an “e” at the end and asked “now what does it spell?” The students changed the word at their desk and raised their hands. The tutor called on a student and they correctly answered “cope”. This continued with more examples. At times the tutor at the board would call on a student to answer before all the students had time to change their cards. In a small setting specifically designed for tutoring this is leaving out the students who need the most practice; they could not keep up. Most of the students were able to demonstrate mastery of the concepts of short o and long o and words ending in e.

This tutoring session did not have the same feel as the other classrooms. I think this is due to the team teaching and larger number of students. The tutor being at the front of the room teaching was not as actively engaged in assessing the students and therefore did not adjust pacing or instruction to individual needs.
Fifth and Sixth Math:

The student tutor ratio was 5:1. This class was a bit livelier in behavior but every child was engaged in the activity. The activity was a math game and the students were excited. The only concern with the behavior is that with the first game SPOT it made assessment of individual students difficult. You weren’t sure everyone had finished.

The next game was 24. In this game students were given a series of 4 numbers. On the chalkboard they were to use computation strategies using only the four numbers to come up with the final number 24. The first problem was 1268.

Solution, student example:

\[6 \times 8 = 48 \text{ divided by } 2 \times 1 = 24\]

Second problem 1446
Solution, student example:

\[
\begin{align*}
6 \\
\div 1 \\
\times 4 \\
28 - 4 = 24
\end{align*}
\]

It was easy to assess students by what they wrote on the board. The tutor could also watch the process of problem solving. This activity was amazing. The students were able to solve some very difficult problems using complicated strategies. The next activity involved a problem solving worksheet. The content of the worksheet was derived from math proficiency test question worksheets. New to the program this year is concentration on math proficiency testing.

Overall Observations:

- The entire staff is actively engaged and supportive of the program.
- The tutors are XXX Public school teachers and most are housed in their own schools. This arrangement facilitates communication between teacher, parent, tutor, and administrator.
- Students can be tutored in either math or reading. The subject area is chosen by the parent.
- The XXX program is very systematic. It is a seamless approach that uses familiar activities and structure at each level to provide a continuous approach.
- It is clear the program has been aligned to state standards and great effort has been made to be the program compliments and reinforces what is being taught in the regular classroom.
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