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Teacher Perceptions of the Impact of Reduced School Budgets on Their Ability to Meet Instructional Needs of Their Students

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TEACHER PERCEPTIONS OF THE IMPACT OF REDUCED SCHOOL BUDGETS ON THEIR ABILITY TO MEET INSTRUCTIONAL NEEDS OF THEIR STUDENTS

by

BRENDA EDENFIELD

(Under the Direction of Russell Mays.)

ABSTRACT

While federal and state leaders have been calling for increased instructional time, the U.S. has been undergoing an economic decline that has resulted in decreased education budgets. This decreased funding has resulted in fewer instructional days, fewer planning and professional learning days for teachers, and smaller school staffs. The purpose of this study was to examine the effect of the economic downturn on elementary instruction in southeast Georgia classrooms. The study design was quantitative non-experimental and employed a survey to gather data from elementary teachers across three southeast Georgia school systems. Results were examined to determine the impact of the economic decline on elementary instructional time and teachers' ability to meet the instructional needs of their students.

INDEX WORDS: Instruction, Economic decline, Educational funding

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by

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DEDICATION

I dedicate this work first and foremost to my heavenly Father who never waivers in His grace and mercies toward me. It is through Him that I am able to accomplish anything and through Him that I have been able to walk through each step of this process.

I can do all things through Him who gives me strength.

~ Philippians 4:13

Secondly, I dedicate this work to my family. Your unending patience, love and support enabled me to complete this endeavor. You held me up during my struggles and believed in me when I didn't believe in myself. Thank you for always loving and believing in me. You are my heroes.

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CHAPTER 1

INTRODUCTION

Introduction to the Study

In 2009, President Barack Obama proposed education reform with increasing both the school week and the school year as central objectives (Lavy, 2009). This was followed by United States Secretary of Education Arne Duncan declaring, “Our school day is too short, our school week is too short, our school year is too short” (Dillon, 2011, para. 4). However, in the midst of this call for increased amounts of instructional time for students, the United States continued into a steady economic decline that has resulted in quite the opposite. The July 5, 2011, edition of the New York Times (Dillon, 2011) reported that “thousands of school districts across the nation are gutting summer school programs, cramming classes into four-day weeks or lopping days off the school year” as a means of compensating for budget shortfalls (para. 1). A research report from the Center on Education Policy identified budget concerns as a “grim situation that is expected to worsen in the coming year” (Kober & Rentner, 2011, p. 1). A review of their report revealed that approximately 70% of all school districts experienced financial cuts in fiscal year 2011, with that percentage predicted to grow to 84% in fiscal year 2012.

Throughout the past several decades, numerous studies have concluded that increased instructional time enhances student achievement, especially for academically struggling subgroups, such as economically disadvantaged and English language learners (California School Board Association [CSBA], 2007; Charles Stewart Mott Foundation [CSMF], 2007; Kober & Rentner, 2011; Lavy, 2009; McMurrer, 2008; National

Commission on Excellence in Education [NCEE], 1983; National Education Commission on Time and Learning [NECTL], 1994; National Science Foundation [NSF], 2002; Nelson, 1990; Resnick, 2007). Unfortunately, as identified subgroups have increased, instructional time has been decreasing due, in large part to the declining economy and shrinking financial resources allocated to education. However, there are few studies that examine the impact of decreased resources on teachers' ability to meet the instructional needs of their students.

Educational leaders must have a clear understanding of the impact of decreased financial resources on instruction if they are to be responsible for formulating plans to ensure optimal learning for students, especially struggling subgroups. In this current climate of ever increasing demands for student achievement and continually decreasing education budgets, the significance of this study cannot be overstated. This study contributed to this knowledge base by exploring teachers perceptions of the impact of reduced budgets on elementary instructional time and teachers' abilities to meet the instructional needs of their students.

Background of the Problem

Instructional Time

Defining instructional time is difficult. Some entities equate instructional time with allocated time (Leinhardt, 1984; Resnick, 2007). Berliner (1990) broke instructional time into allocated time, engaged time, time-on-task, academic learning time, transition time, waiting time, aptitude, perseverance, and pace. The Pennsylvania Department of Education included early dismissals and breakfast as part of instructional time (Chute, 2010). The Georgia Department of Education defined instructional time as "all portions

of the day when instruction or instruction related activities based on the Quality Core Curriculum or Georgia Performance Standards are provided or coordinated by a certified teacher or substitute teacher” (Georgia Department of Education [GADOE], 2010, para. 1). They further identified instructional time as “all the time from the beginning of the school day for students, until the end of the school day for students except for recess, transition time, and lunch” (GADOE, 2010, para 4). At the elementary school level, art, music, physical education, and technology count as instructional time. Any courses taught outside the school day, including before or after-school programs, do not count as instructional time, yet up to 10 clock hours of early dismissal for the purpose of parent-teacher conferences can count as instructional time (GADOE, 2010). Ornstein (1989) defined instructional time as the amount of time an instructor spends on curriculum content.

U.S. Commissioner William T. Harris (as cited in NECTL, 1994) argued in 1894 “[T]he constant tendency [has been] toward a reduction of time” as he discussed the need for students who were prepared to compete globally (para 19). Today’s educators and businessmen continue this conversation as they focus on a global society and the need to prepare students for global competition. According to Chen (2006), the United States is putting unfair burdens on its children by expecting the impossible of them; expecting them to be prepared to compete against students from other countries where instructional time is much greater than that of the United States. Research by Stevenson and Stigler (1992) as well as others supported the premise that U.S. schools provide less core instructional time than other industrialized nations (Chen, 2006; CSMF, 2007; Lavy, 2009; National Science Foundation [NSF], 2002; NECTL, 1994).

The 1983 Nation at Risk report recommended 7 hour days and 200 to 220 day school years as part of its many other recommendations for education reform (American Association of School Librarians [AASL] et al, 2007; NCEE, 1983). According to Roth, Brooks-Gunn, Linver and Hofferth (2003), the No Child Left Behind Act of 2001 did not influence changes in the number of total instructional minutes, hours, or days. Instead, it caused significant shifts in how time was allocated. Studies conducted by McMurrer (2008) and Katz (2008) indicated that school districts across the United States increased English Language Arts (ELA) and math instructional minutes by an average of 43%. They did this by making substantial cuts in other content areas, most significantly science and social studies by an average of 32%. Four years after No Child Left Behind, studies found that the 71% of all school districts reported increasing ELA and math instructional time while decreasing instructional time in at least one other content area. Thirty three percent of the districts reported decreasing time in social studies while 29% reported decreasing instructional time in science. Fine arts instruction decreased in 22% of the districts (AASL et al, 2007).

A study by Roth et al. (2003) reported the typical school day as 6 hours and 35 minutes long with only 64.4% of the time spent as instructional. This study identified the remainder of the day as being divided as follows: 14.6% maintenance, 11.9% enrichment, and 6.8% recess-related.

A report from the Charles Stewart Mott Foundation (2007) stated that “unless we profoundly change our thinking and policies about when, where, and how children learn and develop, our [nation’s] steady progress as an economy and as a society will end” (p. 1). In 2009, President Barack Obama proposed education reform that included

increasing both the school week and the school year as central objectives (Lavy, 2009). This was followed by U.S. Secretary of Education Arne Duncan declaring “our school day is too short, our school week is too short, our school year is too short.” However, no significant changes in the total amount of instructional time afforded students have yet to be seen (Dillon, 2011, para. 4).

Impact on Students

Since 1980, multiple studies have focused on the value of measuring instructional time as it affects student learning including research by Berliner (1990), the California School Board Association [CSBA] (2007), Coates (2003), Lavy (2009), Leinhardt (1984), the Pennsylvania State Education Association [PSEA] (2010), Resnick (2007) and Sankar (n.d.). Although these studies often disagreed on the value to be placed on this specific measure, they all agreed that instructional time affects specific subgroups of students differently (CSBA, 2007; Lavy, 2009; Resnick, 2007; Sankar, n.d.). CSMF (2007) found that increased instructional time positively impacted learning goals which included deep understanding of rigorous content; however, they also readily conceded that what happened during that increased instructional time could not be discounted. In other words, increasing instructional time was not a simple prescription. Coates (2003) found that while effects of increasing instructional time were positive, the effectiveness of any increases in instructional time was adversely affected when class size was increased. When conducting a study across countries, both developed and developing, Lavy (2009) found positive effects of increased instructional time on test scores was higher in developed countries than in developing countries. This was attributed to higher levels of accountability, autonomy, and funding for educational resources. His research

also indicated larger positive effects on girls, low socio-economic students, and immigrants.

A collaborative project involving national associations found that “time by itself has little direct impact on performance;” that reform requires more than just adding time (AASL et al., 2007, p. 3). Leinhardt’s (1984) findings agreed that allocated time as a stand-alone measure was not effective; rather, achieving positive results depended more on what happened during the allocated time period. Leinhardt (1984) suggested the need for additional studies that focus on what teachers do during that time. Nelson’s (1990) study identified time as one of nine major factors affecting student achievement .

Vorsino (2011) reported that the Hawaiian State Board of Education referenced state-wide AYP reports to illustrate that “more instructional time doesn’t necessarily translate into sizable learning gains – or mean students at schools with fewer instructional hours are falling behind” (para 5). Despite this sentiment, the Hawaii Senate and Legislature approved a bill requiring at least 5 hours, 5 minutes of instructional time for elementary schools.

A study conducted by Carlyle (2008) targeting rural southeast Georgia examined the achievement disparity between seventh grade non-white and economically disadvantaged students as compared to white and economically advantaged students. Findings indicated significantly lower levels of achievement for both the economically disadvantaged and nonwhite subgroups. The disparity between white and nonwhite populations may be the largest dilemma facing the U.S. public school system according to Oatts (2005).

The Department of Health and Human Services guides the criteria for determining participation in free and reduced lunch programs for students (Poverty Guidelines, Research, & Measurement, n.d.). Students who qualify for the free or reduced lunch program are identified as economically disadvantaged. Census information for May, 2007, indicated that minorities make up 34% of the U.S. population with 15% Hispanic, 13.6% black, and 5% Asian (Correspondent, 2008). Studies indicate that the impact of increased or decreased instructional time is more pronounced for specific subgroups including economically disadvantaged students and minority populations (CSBA, 2007; Lavey, 2009; Sankar, n.d.; Resnick, 2007). Resnick (2007) found low-performing students, regardless of subgroup, to be most positively impacted by increased instructional time.

A study sponsored by the World Bank provides evidence that “school-based instructional learning is especially significant for poor children” (Sankar, n.d., p. 12). The Instructional Time Task Force of CSBA supported those findings as they looked at the effects of long summer breaks. They found that poor and minority students lose significantly more reading and math progress over traditional summer breaks than do white students (CSBA, 2007). In a study across developed and developing countries, Lavy (2009) found larger positive effects of increased instructional time on low socio-economic students.

A 2008 study (Beiswinger, 2009) which provided additional instructional time for eighth grade students in Midwest Missouri found no significant difference between growth in achievement levels of economically disadvantaged and economically advantaged students in the content area of math. However, in the area of language arts,

economically disadvantaged students showed higher growth in achievement scores than did those students who were not economically disadvantaged. Additional results from this study showed a greater rate of academic growth for economically disadvantaged students following implementation of a tardy reduction program.

Instructional Best Practices

Collins' research (2001, 2009) taught a "flywheel effect" that called for sustained and focused momentum on a tangible product. It called for a consistent push of straightforward, intentional core practices focused on getting desired results. Examples of organizations which endured were committed to delivering results and demanded high standards of accountability and credibility in measuring impact. Those organizations that endured over a significant period of time continued that same push over time with as much intensity and consistency as when they began their positive momentum (Collins, 2009).

Meta-analyses conducted by Hattie (2009), Marzano (2003), and Marzano, Pickering and Pollock (2001) as well as research studies by Odden (2009) and Schmoker (2011) translated these same findings into the realm of education. These studies reiterated the need to simplify the smorgasbord of strategies to those that have shown proven positive effects on student achievement. Marzano (2003) and Hattie (2009) have proven that the effect size of precision implementation of specific teaching strategies can be statistically measured. Hattie explained that effect size indicates the "magnitude of study outcomes" and that "an effect size of $d=1.0$ indicates an increase of one standard deviation on the outcome. A one standard deviation increase is typically associated with advancing children's achievement by two to three years, improving the rate of learning by

50%” (Hattie, 2009, pp. 7-8). Hattie (2009) described an effect size of $d=.40$ as the average typical effect of all possible influences and therefore, the hinge-point for measuring effect size. A hinge-point of $d=.40$ equates to average student achievement growth of one year; therefore, a researcher would be seeking an effect size greater than $d=.40$ for achievement gains to be above average.

Marzano defined nine categories of instructional strategies which significantly impact student achievement. These strategies included identifying similarities and differences, summarizing note taking, reinforcing effort and providing recognition, homework and practice, nonlinguistic representations, cooperative learning, setting objectives and providing feedback, generating and testing hypotheses, questions, cues, and advanced organizers (Marzano, 2003; Marzano, Pickering, and Pollock, 2001).

Marzano also identified classroom management as a significant teacher-level factor affecting student achievement. He defined classroom management as a “confluence of teachers actions in four distinct areas: establishing and enforcing rules and procedures, carrying out disciplinary actions, maintaining effective teacher and student relationships, and maintaining an appropriate mental set for management” (pp. 88-89).

Hattie (2009) identified multiple best practices and classroom influences with an effect level of 0.40 or higher. These included classroom management, teacher-student relationships, professional development, setting expectations, advanced organizers, concept mapping, providing specific feedback and formative evaluation, higher order questioning, spaced vs. mass practice, peer tutoring, meta-cognitive strategies, study skills, self-verbalization/self-questioning.

Schmoker (2011) perpetuated the findings of Hattie (2009) and Marzano (2003) through the identification of the following practices as high impact strategies: setting clear learning objectives, interactive lecture and direct teaching, guided practice, literacy based lessons, specific vocabulary instruction, higher-order thinking and writing, and formative assessment.

Payne (2009), who focused her research around students from poverty and how to overcome the obstacles to academic achievement organized a set of strategies to positively affect student achievement. Although she did not attempt to measure effect size, she compiled a plethora of research to create a set of strategies for removing learning barriers for students of poverty. Among the recommendations were numerous strategies already identified by Marzano (2003) and Hattie (2009). These strategies included mental models, composing questions, self-talk, problem solving, graphic organizers and mental models, visual representations for vocabulary, self-assessment, tutoring, meta-cognitive processes, cooperative learning, classroom management, and building relationships.

Funding

The amount of instructional time a school system allocates may depend more on funding than theory. Financial resources, in large part, dictate many education decisions. As standards-based education has come to dominate education policy, school finance has changed its focus to determining whether the funding is adequate to produce desired levels of student performance (Odden, 2003). “Designing an adequate school finance system requires the state to identify both an adequate expenditure level for the typical student in the typical district and sufficient adjustments for different student needs”

(Odden, 2003, p. 122). This adequate level must provide revenues that will allow the implementation of strategies proven successful in educating all students to high standards of performance (Odden, Archibald, & Fermanich, 2005).

In Georgia, *all students* means a racially and economically diverse population. The state population is comprised of 55% White students, 38% Black students, and 5.5% Hispanic students. But there is a wide range of variation across systems including systems where the percentage of white students range from zero to 100%, and Hispanic percentages range from zero to 36%. The range of economically disadvantaged students is just as wide across the districts (Rubenstein & Sjoquist, 2003).

Further complicating the issue of equitable funding is the fact that there is no single standard that applies across states or districts as to the absolute cost of an adequate education (Baker, 2005). Baker (2004) also noted that there are fringe populations, defined as at risk, English language learners, and gifted students who are often treated with marginal adjustments to general funding calculations rather than the funding that is required to meet their educational needs. He further stated that “there remains much scrutiny over the reliability of current methods for estimating either the absolute or relative costs of education (Baker, 2004, p.51). Interestingly enough, educational dollars expended for instruction remains at 61%, the exact same level it has remained at for the past 50 years (Odden, n.d.).

Funding for education in Georgia, like most other states, is derived from state and local taxes. Whereas funding inequities exists across states due to differences in state funding allotments, funding inequities among Georgia school districts exists primarily due to differing local tax either in the tax revenue base or tax burden placed on the

general public (Montello, 2010). In 2006, Georgia public school systems received 7.40% of their funding from federal funds, 51.26% from state funds, and 41.34% from local funds (Georgia School Superintendents Association [GSSA], 2006). This compares to 2002 when Georgia public school systems received 6% of their funding from federal funds, 56% from state funds, and 38% from local funds (Rubenstein & Sjoquist, 2003). The Georgia School Funding Association (2011) showed that Georgia public school systems received 50.1% of their funding from federal and state funds and 49.9% from local funds in 2010.

Local school districts are required to levy a minimum of five mills local taxable property for education but may levy as much as 20 mills. A mill is \$1 of tax for every \$1,000 of assessed property value. This is the district's "local fair share." Assessed value of a property is calculated by multiplying .40 times the appraised property value to produce the assessed value. GSSA explained that Quality Basic Education Act [QBE] which was enacted in 1985 is the formula used to earn funds and that approximately 90% of QBE funds go to pay salaries (GSSA, 2006; Rubenstein & Sjoquist, 2003). The QBE formula is derived from the number of full time equivalents [FTEs] which is defined as the number of students who are enrolled in each class (segment) during a school day.

Economic Downturn

Beginning with fiscal year [FY] 2003, the state of Georgia began a series of austerity cuts in funding. Between 2003 and 2009, these reductions decreased funding for local systems by more than \$2 million as well as across the board reductions in the QBE formula totaling \$250 million per year (Georgia School Funding Association [GSFA], 2009). Additional decreases in funding have included a 3% cut to FY 2010

fiscal budget (Tharpe, 2010), and a 5.5% cut relative to the FY 2010 fiscal budget for FY 2011 (Johnson, Oliff, & Williams, 2011). While all of these cuts were happening at the state level, revenue has continued to shrink for local governments as property tax collections and properties values drop (Jones, 2010).

Despite calls for more instructional time (AASL et al, 2007;; Chen, 2006; CSBA, 2007; Dillon, 2011; Lavy, 2009; Resnick, 2007), the current economic concerns of federal, state, and local education systems have not supported this endeavor. Instead, the economic situation has forced many school systems to cut staffs, cut summer and after school programs, decrease student days, and decrease teacher planning/preparation days (Asheville City Schools, 2011; Dillon, 2011; Coffield, 2011; Kober & Rentner, 2011). Dillon (2011) cited a spokesman for the federal Department of Education saying, “We’ve been pushing back against efforts to shorten not just the school day but the week and year . . . we’re trying to prevent what exists now from shrinking any further” (para.3).

According to McMurrer (2008), approximately 70% of all school districts experienced financial cuts in FY2011, with that percentage predicted to grow to 84% in FY2012. Many of those districts compensated for decreased funding through staff cuts. Approximately 61% of the districts predicted staff cuts although expectations were that this figure would rise. Other reductions included cuts in instructional materials, professional learning activities, technology and/or equipment, facilities maintenance, student support services, extracurricular activities, and instructional time. All types of districts, urban, suburban, and rural were affected. Approximately 66% of districts indicated that they would be postponing or stopping reform initiatives such as afterschool programs. Kober and Rentner (2011) also issued a dire warning that “federal and state

governments must recognize that if deep cuts are made in education, this will stall the very actions that are most likely to boost our economic situation in the future” (p. 15).

Balancing Instructional Time and the Economic Downturn

States and school districts are being forced to compromise progress toward initiatives and make tough decisions to maintain their current status (Asheville City Schools, n.d.; Belmont Public Schools, n.d.; Fuoco, 2011; PSEA, 2010; Warren, 2011). The Imua Alliance is asking the Hawaii State School Board to consider slowing down plans to increase instructional time, estimating that the planned increases will cost between \$45 million to \$55 million to “ensure that the state’s budget and teachers’ pocketbooks are not further crippled” (Vorsino, 2011, para. 20). The Belmont school system of Massachusetts is enacting Wednesday early release days to provide for professional learning. This is being accomplished by adding 10 minutes of instructional time to the other days of the week (Belmont Public Schools, n.d.). In response to a state mandate to increase the school calendar by five days, Asheville, North Carolina, city schools will increase instructional time by 30 minute per day (Asheville City Schools, 2011). Chicago City Schools will cut instructional time by 30 minutes per day but plan to use this time for breakfast which will actually increase their budget by \$41 million (Warren, 2011). The Pennsylvania State Education Association is working to continue their reform initiatives through maximizing current instructional time and professional planning time while working with community partners to support extended day or year programs (Pennsylvania State Education Association, 2010). Although the West Allegheny school district is predicted to lose approximately \$850,000 this year, they will continue with plans to add an additional day for students, three additional days for

teachers, and fifteen minutes to the teacher work day. Part of their plan to financially support this is through increased contributions to employee health care contributions (Fuoco, 2011).

Chute (2010) reported an emphasis on maximizing instructional time, “fighting and clawing for every instructional minute we can get” (para. 15). At the same time, Dillon (2011) reported that “untold numbers of schools nationwide have reduced their hours and days, often by furloughing teachers” (para. 8). He also cited teachers in Brandon, South Dakota who were working without pay to keep special programs going while some states such as North Carolina raised minimum instructional days but neglected to provide the funding to finance the initiative.

According to the Georgia Department of Education (2010), Georgia has redefined its original 180 day student calendar as minutes of instruction which require 48,600 minutes of instruction in kindergarten through third grade, 54,000 minutes in fourth and fifth grades, and 59,400 minutes in sixth through twelfth grade. This allows local systems flexibility to set their own duration and number of student days. They also reported increased class size allowances and cuts in state funding for multiple programs including professional learning activities and instructional materials.

Summary

There is no doubt that the economic downturn plaguing the United States is impacting its education system. In many instances, instructional time has been directly impacted through shrinking school calendars; what may not be so obvious is the impact the decreased budget has had as a result of decreased resources and school staffs which may include fewer professional learning opportunities, less collaborative planning and

teacher preparation time, increased class sizes, increased teacher responsibilities, and a decrease in instructional resources. There is currently no evidence that financial relief is looming on the horizon for public education, yet children are still showing up to school every day expecting the best education that elementary classrooms have to offer. Society continues to be dependent on its educators to figure out the most effective means of educating its children regardless of a declining economy. There have been few studies devoted to seeking what impact the declining economy is having on instructional time and teachers' ability to meet the instructional needs of their students. This study is important to both the education profession and society, as it provides a basis for determining the effects of the economy on a crucial aspect of education, elementary instruction.

Problem Statement

At the same time that federal and state leaders have been calling for increased instructional time, the United States has been undergoing an economic decline that has resulted in decreased education budgets. This decreased funding has resulted in fewer instructional days, fewer planning and professional learning days for teachers, and smaller school staffs among other significant cuts to education budgets. Research completed by the Center on Education Policy has predicted no end in sight and has suggested that 84% of public school systems will experience financial cuts during the 2011 school year (Kober & Rentner, 2011).

There have been numerous studies devoted to quantifying the importance of instructional time; however, the downward trend in the U.S. economy has brought forth a new and unstudied dynamic. While organizations such as the Center on Education,

federal and state departments of education, and contributors to education journals are beginning to examine the financial cuts thrust upon public education, there appears to be a clear gap in information concerning the impact of this economic downturn on elementary instructional time and teachers' ability to meet the instructional needs of their students. This study contributed to that knowledge base by exploring teachers' perceptions of the impact of reduced budgets on teachers' abilities to meet the instructional needs of their students.

Research Question

The purpose of this study was to explore the impact of reduced school budgets on teachers' abilities to meet the instructional needs of their students. The overarching research question of the study was this: How do teachers meet the instructional needs of their students in times of reduced school budgets? The following questions served to further clarify teacher perceptions as a means to answering this question:

1. What effect have reduced budgets had on elementary instructional time?
2. What challenges have elementary teachers encountered while trying to meet the instructional needs of their students?
3. What best practices have elementary teachers used to compensate for a decreased school budget?

Significance of the Study

There is currently no evidence that financial relief is looming on the horizon for public education, yet children are still showing up to school every day expecting and deserving the best education that elementary classrooms have to offer. Society continues to be dependent on its educators to figure out the most effective means of educating its

children regardless of a declining economy. The first step requires a close examination of what is happening to elementary instruction as a result of diminishing funds. From there, solutions can be sought. This study is important to both the education profession and society as it provides a basis for determining the effects of the economy on a crucial aspect of education, elementary instructional time and teacher perceptions of their ability to meet the instructional needs of their students.

Procedures

Research Design

A review of literature has shown that there is little data available which examines the effect of the economic downturn on elementary instruction. Because of this lack of data, this study investigated teacher perceptions of the impact of decreased financial resources on elementary teachers' ability to meet the instructional needs of their students. A descriptive methodology was chosen because it allowed for an exploration of the factors that play a role in the phenomena (Creswell, 2009). The design of the study was non-experimental and employed a survey to gather the data. The researcher analyzed and presented findings as frequencies, mean score ranges, and standard deviation.

Instrumentation

Because research has revealed that there was currently no survey available to examine this construct, the researcher created a survey based on literature findings. This survey included both open- and close-ended items and was divided into five sections:

- I. Demographics;
- II. Impact of reduced budget on instructional time;

- III. Challenges teachers have encountered while trying to meet the instructional needs of students;
- IV. Best practices identified by teachers to compensate for decreased instructional time;
- V. Opportunity for teachers to include information that the survey did not include.

Field testing occurred prior to beginning the actual data collection to ensure construct validity, test-retest reliability and to improve survey items and format (Creswell, 2009).

The feedback from the field test was used to make appropriate revisions.

Sample and Sampling

Based on an analysis of (1) decrease in certified personnel, (2) decreases in instructional days, and (3) decreases in the number of contracted days for certified staff as well as consideration of other sources for funding or instructional support that may be available to local school systems, five school systems were chosen for the focus of this research. Those systems chosen included Appling County, McIntosh County, Screven County, Tattnall County, and Wayne County. Of these five systems, administrators of three of these systems, Appling County, McIntosh County and Screven County, chose not to allow the researcher to contact their teachers. Certified teachers at each of the elementary schools within the remaining systems were invited to participate in this study. Elementary teachers were chosen due to the focus of this study. Following approval from system superintendents and the Georgia Southern University Internal Review Board, the researcher contacted school principals and arranged to meet with certified staffs to invite their participation. The opportunity to share their perceptions of the impact of the

economy on instruction as well as an opportunity to receive information about how other teachers within their region responded encouraged teachers to participate.

Data Collection

A survey was used to collect anonymous data from approved participants. Using the demographics section of the survey to filter out teachers with less than three years teaching experience, only results from teachers with three or more years of teaching experience were used.

Limitations, Delimitations, and Assumptions

Because this study was restricted to one southeast Georgia region, generalizability may be limited. Due to the use of self reporting as the only means of gathering data, teacher perceptions and ability to recall past experience may have limited the reliability of results.

Definition of Terms

At-risk – A label given to students who have characteristics that might prohibit them from being academically successful in school, such as minority or poverty.

Best Practice – A technique or method that has been proven through research to consistently produce superior academic results.

Collaborative Planning – Planning that provides opportunities for teachers to work together to examine their practice, consult with one another, and develop their teaching skills.

Economically Disadvantaged Student – A student who qualifies for free or reduced lunch.

English Learner (EL) – A person whose first language was a language other than English and who is currently in the process of learning English.

Fulltime Equivalent (FTE) – The formula used to calculate the number of instructional segments a student receives per day. Educational funds are allocated per FTEs earned.

Furlough – Term for a decrease in teacher work days due to lack or potential lack of funds.

Instructional time – The amount of time students spend engaged in learning.

Local Education Agency (LEA) – An educational entity at the local government level that operates schools or contracts for educational services.

Non-instructional duties – Activities required of teachers beyond those directly related to teaching students.

Per-pupil expenditure – A measure of school financial resources calculated as the total district expenditure divided by the district's total enrollment.

Professional Learning – Activities which improve teacher effectiveness in meeting instructional needs of students.

Student Engagement – Active participation in learning.

Summary

While federal and state leaders have been calling for increased instructional time, the United States has been undergoing an economic decline that has resulted in decreased education budgets. This decreased funding has resulted in fewer instructional days, less planning and professional learning days for teachers, and smaller school staffs. The purpose of this study was to examine teacher perceptions of the effect of the economic

downturn on elementary instructional time and teachers' ability to meet the instructional needs of the students in southeast Georgia classrooms. The study design was quantitative non-experimental and employed a survey to gather data from elementary teachers across select southeast Georgia school systems. Results were examined to determine teacher perceptions of the impact of the economic decline on elementary instructional time and teachers' ability to meet the instructional needs of their students. This study is important to both the education profession and society as it provides a basis for determining the effects of the economy on a crucial aspect of education, elementary instruction.

CHAPTER 2

REVIEW OF LITERATURE

Instructional Time

Defining instructional time is difficult. Some entities equate instructional time with allocated time (Resnick, 2007; Leinhardt, 1984). Berliner (1990) broke instructional time into allocated time, engaged time, time-on-task, academic learning time, transition time, waiting time, aptitude, perseverance, and pace. The Pennsylvania Department of Education included early dismissals and breakfast as part of instructional time (Chute, 2010). The Georgia Department of Education defined instructional time as “all portions of the day when instruction or instruction related activities based on the Quality Core Curriculum or Georgia Performance Standards are provided or coordinated by a certified teacher or substitute teacher” (Georgia Department of Education [GADOE], 2010, para. 1). They go further to identify instructional time as “all the time from the beginning of the school day for students, until the end of the school day for students except for recess, transition time, and lunch” (GADOE, 2010, para 4). At the elementary school level, art, music, physical education, and technology count as instructional time. Any courses taught outside the school day, including before or after-school programs, do not count as instructional time, yet up to 10 clock hours of early dismissal for the purpose of parent-teacher conferences can count as instructional time (GADOE, 2010). Ornstein (1989) defined instructional time as the amount of time an instructor spends on curriculum content.

U.S. Commissioner William T. Harris (as cited in NECTL, 1994) argued in 1894 “[T]he constant tendency [has been] toward a reduction of time” as he discussed the need

for students who were prepared to compete globally (para 19). Today's educators and businessmen continue this conversation as they focus on a global society and the need to prepare students for global competition. According to Chen (2006), the United States is putting unfair burdens on its children by expecting the impossible of them; expecting them to be prepared to compete against students from other countries where instructional time is much greater than that of the United States. Research by Stigler and Stevenson (1992) as well as others supported the premise that U.S. schools provide less core instructional time than other industrialized nations (Chen, 2006; CSMF, 2007; Lavy, 2009; National Science Foundation [NSF], 2002; NECTL, 1994).

The 1983 Nation at Risk report recommended 7 hour days and 200 to 220 day school years as part of its many other recommendations for education reform (American Association of School Librarians [AASL] et al, 2007; NCEE, 1983). According to Roth, Brooks-Gunn, Linver and Hofferth (2003), the No Child Left Behind Act of 2001 did not influence changes in the number of total instructional minutes, hours, or days. Instead, it caused significant shifts in how time was allocated. Studies conducted by McMurrer (2008) and Katz (2008) indicated that school districts across the United States increased English Language Arts (ELA) and math instructional minutes by an average of 43%. They did this by making substantial cuts in other content areas, most significantly science and social studies by an average of 32%. Four years after No Child Left Behind, studies found that the 71% of all school districts reported increasing ELA and math instructional time while decreasing instructional time in at least one other content area. Thirty three percent of the districts reported decreasing time in social studies while 29%

reported decreasing instructional time in science. Fine arts instruction decreased in 22% of the districts (AASL et al, 2007).

A study by Roth, Brooks-Gunn, Linver and Hofferth (2003) reported the typical school day as 6 hours and 35 minutes long with only 64.4% of the time spent as instructional. This study identified the remainder of the day as being divided as follows: 14.6% maintenance, 11.9% enrichment, and 6.8% recess-related.

A report from the Charles Stewart Mott Foundation (2007) stated that “unless we profoundly change our thinking and policies about when, where, and how children learn and develop, our [nation’s] steady progress as an economy and as a society will end” (p. 1). In 2009, President Barack Obama proposed education reform that included increasing both the school week and the school year as central objectives (Lavy, 2009). This was followed by U.S. Secretary of Education Arne Duncan declaring “our school day is too short, our school week is too short, our school year is too short;” however, no significant changes in the total amount of instructional time have been seen (Dillon, 2011, para. 4).

Impact on Students

Since 1980, multiple studies have focused on the value of measuring instructional time as it affects student learning including research by Berliner (1990), the California School Board Association [CSBA] (2007), Coates (2003), Lavy (2009), Leinhardt (1984), the Pennsylvania State Education Association [PSEA] (2010), Resnick (2007) & Sankar (n.d.). Although these studies often disagreed on the value to be placed on this specific measure, they all agreed that instructional time affects specific subgroups of students differently (Resnick, 2007; CSBA, 2007; Lavy, 2009; Sankar, n.d.). CSMF

(2007) found that increased instructional time positively impacted learning goals which included deep understanding of rigorous content; however, they also readily conceded that what happened during that increased instructional time could not be discounted. In other words, increasing instructional time was not a simple prescription. Coates (2003) found that while effects of increasing instructional time were positive, the effectiveness of any increases in instructional time was adversely affected when class size was increased. When conducting a study across countries, both developed and developing, Lavy (2009) found positive effects of increased instructional time on test scores was higher in developed countries than in developing countries. This was attributed to higher levels of accountability, autonomy, and funding for educational resources. His research also indicated larger positive effects on girls, low socio-economic students, and immigrants.

A collaborative project involving national associations found that “time by itself has little direct impact on performance;” that reform requires more than just adding time (AASL et al., 2007, p. 3). Leinhardt’s (1984) findings agreed that allocated time as a stand-alone measure was not effective; that achieving positive results depends more on what happens during that time. Leinhardt (1984) suggested the need for additional studies that focus on what teachers do during that time. Nelson’s (1990) study identified time as one of nine major factors affecting student achievement . Vorsino (2011) reported that the Hawaiian State Board of Education referenced state-wide AYP reports to illustrate that “more instructional time doesn’t necessarily translate into sizable learning gains – or mean students at schools with fewer instructional hours are falling

behind” (para 5). Despite this sentiment, the Hawaii Senate and Legislature approved a bill requiring at least 5 hours, 5 minutes of instructional time for elementary schools.

A study conducted by Carlyle (2008) targeting rural southeast Georgia examined the achievement disparity between seventh grade non-white and economically disadvantaged students as compared to white and economically advantaged students. Findings indicated significantly lower levels of achievement for both the economically disadvantaged and nonwhite subgroups. The disparity between white and nonwhite populations may be the largest dilemma facing the U.S. public school system according to Oatts (2005).

The Department of Health and Human Services guides the criteria for determining participation in free and reduced lunch programs for students (Poverty Guidelines, Research, & Measurement, n.d.). Students who qualify for the free or reduced lunch program are identified as economically disadvantaged. Census information for May, 2007, indicated that minorities make up 34% of the U.S. population with 15% Hispanic, 13.6% Black, and 5% Asian (Correspondent, 2008). Studies indicate that the impact of increased or decreased instructional time is more pronounced for specific subgroups including economically disadvantaged students and minority populations (CSBA, 2007; Lavey, 2009; Resnick, 2007; Sankar, n.d.). Resnick (2007) found low-performing students, regardless of subgroup, to be most positively impacted by increased instructional time.

A study sponsored by the World Bank provides evidence that “school-based instructional learning is especially significant for poor children” (Sankar, n.d., p. 12). The Instructional Time Task Force of the CSBA supported those findings as they looked

at the effects of long summer breaks. They found that poor and minority students lose significantly more reading and math progress over traditional summer breaks than do white students (CSBA, 2007). In a study across developed and developing countries, Lavy (2009) found larger positive effects of increased instructional time on low socio-economic students.

A 2008 study (Beiswinger, 2009) which provided additional instructional time for eighth grade students in Midwest Missouri found no significant difference between growth in achievement levels of economically disadvantaged and economically advantaged students in the content area of math. However, in the area of language arts, economically disadvantaged students showed higher growth in achievement scores than did those students who were not economically disadvantaged. Additional results from this study showed a greater rate of academic growth for economically disadvantaged students following implementation of a tardy reduction program.

Instructional Best Practices

Collins' research (2001, 2009) taught a "flywheel effect" that called for sustained and focused momentum on a tangible product. It called for a consistent push of straightforward, intentional core practices focused on getting desired results. Examples of organizations which endured were committed to delivering results and demanded high standards of accountability and credibility in measuring impact. Those organizations that endured over a significant period of time continued that same push over time with as much intensity and consistency as when they began their positive momentum (Collins, 2009).

Meta-analyses conducted by Hattie (2009), Marzano (2003), and Marzano, Pickering and Pollock (2001) as well as research studies by Odden (2009) and Schmoker (2011) translate these same findings into the realm of education. These studies reiterate the need to simplify the smorgasbord of strategies to those that have shown proven positive effects on student achievement. Marzano (2003) and Hattie (2009) have proven that the effect size of precision implementation of specific teaching strategies can be statistically measured. Hattie explained that effect size indicates the “magnitude of study outcomes” and that “an effect size of $d=1.0$ indicates an increase of one standard deviation on the outcome. A one standard deviation increase is typically associated with advancing children’s achievement by two to three years, improving the rate of learning by 50%” (Hattie, 2009, pp. 7-8). Hattie (2009) described an effect size of $d=.40$ as the average typical effect of all possible influences and therefore, the hinge-point for measuring effect size. A hinge-point of $d=.40$ equates to average student achievement growth of one year; therefore, a researcher would be seeking an effect size greater than $d=.40$ for achievement gains to be above average.

Marzano defined nine categories of instructional strategies which significantly impact student achievement. These strategies include identifying similarities and differences, summarizing note taking, reinforcing effort and providing recognition, homework and practice, nonlinguistic representations, cooperative learning, setting objectives and providing feedback, generating and testing hypotheses, questions, cues, and advanced organizers (Marzano, 2003; Marzano, Pickering, and Pollock, 2001). Table 2.1 provides the specific behaviors associated with these categories.

Table 2.1

Marzano's Instructional Strategies that Affect Student Achievement

Instructional category	Specific behaviors
Identifying similarities and differences	<ul style="list-style-type: none"> • Assigning in-class homework tasks that involve comparison and classification • Assigning in-class and homework tasks that involve metaphors and analogies
Summarizing and note taking	<ul style="list-style-type: none"> • Asking students to generate verbal summaries • Asking students to generate written summaries • Asking students to take notes • Asking students to revise their notes, correcting errors and adding information
Reinforcing effort and providing recognition	<ul style="list-style-type: none"> • Recognizing and celebrating progress toward learning goals throughout a unit • Recognizing and reinforcing the importance of effort • Recognizing and celebrating progress toward learning goals at the end of a unit
Homework and practice	<ul style="list-style-type: none"> • Providing specific feedback on all assigned homework • Assigning homework for the purpose of students practicing skills and procedures that have been the focus of instruction
Nonlinguistic representations	<ul style="list-style-type: none"> • Asking students to generate mental images representing content • Asking students to draw pictures or pictographs representing content • Asking students to act out content • Asking students to make physical models of content • Asking students to make revisions in their mental images, pictures, pictographs, graphic organizers, and physical models
Cooperative learning	<ul style="list-style-type: none"> • Organizing students in cooperative groups when appropriate • Organizing students in ability groups when appropriate
Setting objectives and providing feedback	<ul style="list-style-type: none"> • Setting specific learning goals at the beginning of a unit • Asking students to set their own learning goals at the beginning of a unit • Providing feedback on learning goals throughout

Generating and testing hypothesis	<p>the unit</p> <ul style="list-style-type: none"> • Asking students to keep track of their progress on learning goals • Providing summative feedback at the end of a unit • Asking students to assess themselves at the end of a unit • Engaging students in projects that involve generating and testing hypotheses through problem solving tasks • Engaging students in projects that involve generating and testing hypotheses through decision making tasks • Engaging students in projects that involve generating and testing hypotheses through investigation tasks • Engaging students in projects that involve generating and testing hypotheses through experimental inquiry tasks • Engaging students in projects that involve generating and testing hypotheses through systems analysis tasks • Engaging students in projects that involve generating and testing hypotheses through invention tasks
Questions, cues, and advanced organizers	<ul style="list-style-type: none"> • Prior to presenting new content, asking questions that help students recall what they might already know about the content • Prior to presenting new content, providing students with direct links with what they have studied previously • Prior to presenting new content, providing ways for students to organize or think about the content

Note. Reproduced from Marzano, R. J. (2003). *What works in schools: Translating research into action*. Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano (2003) also identified classroom management as a significant teacher-level factor affecting student achievement. He defined classroom management as a “confluence of teachers actions in four distinct areas: establishing and enforcing rules and procedures, carrying out disciplinary actions, maintaining effective teacher and student relationships, and maintaining an appropriate mental set for management” (pp. 88-89).

Hattie (2009) identified multiple best practices and classroom influences with an effect level of 0.40 or higher. These included classroom management, teacher-student relationships, professional development, setting expectations, advanced organizers, concept mapping, providing specific feedback and formative evaluation, higher order questioning, spaced vs. mass practice, peer tutoring, meta-cognitive strategies, study skills, self-verbalization/self-questioning, and specific vocabulary instruction. Table 2.2 identifies the effect size of these strategies.

Table 2.2

Best Practices Identified by Hattie

Practice	Effect size
Formative evaluation	0.90
Building positive teacher-student relationships	0.72
Providing effective and specific feedback	0.71
Spaced vs. mass practice	0.71
Meta-cognitive strategies	0.69
Vocabulary instruction in context	0.67
Self-verbalization/self-questioning	0.64
Professional learning/collaboration	0.62
Study skills	0.59
Mastery learning	0.57
Peer tutoring	0.55
Building classroom cohesion	0.53
Classroom management	0.52
Setting expectations for student behavior and learning	0.43
Advanced organizers	0.41
Cooperative learning	0.41
Questioning	0.41

Note. Adapted from Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York, NY: Routledge.

Schmoker (2011) perpetuated the findings of Hattie (2009) and Marzano (2003) through the identification of the following practices as high impact strategies: setting clear learning objectives, interactive lecture and direct teaching, guided practice, literacy based lessons, specific vocabulary instruction, higher-order thinking and writing, and formative assessment.

Payne (2009), who focused her research around students from poverty and how to overcome the obstacles to academic achievement, has organized a set of strategies to positively affect student achievement. Although she did not attempt to measure effect size, she compiled a plethora of research to create a set of strategies for removing learning barriers for students of poverty. Among the recommendations are numerous strategies already identified by Marzano (2003) and Hattie (2009). These strategies include mental models, composing questions, self-talk, problem solving, graphic organizers and mental models, visual representations for vocabulary, self-assessment, tutoring, meta-cognitive processes, cooperative learning, classroom management, and building relationships.

Funding

The amount of instructional time a school system allocates may depend more on funding than theory. Financial resources, in large part, dictate many education decisions. As standards-based education has come to dominate education policy, school finance has changed its focus to determining whether the funding is adequate to produce desired levels of student performance (Odden, 2003). “Designing an adequate school finance system requires the state to identify both an adequate expenditure level for the typical student in the typical district and sufficient adjustments for different student needs”

(Odden, 2003, p. 122). This adequate level must provide revenues that will allow the implementation of strategies proven successful in educating all students to high standards of performance (Odden, Archibald, & Fermanich, 2005).

In Georgia, *all students* means a racially and economically diverse population. The state population is comprised of 55% White students, 38% Black students, and 5.5% Hispanic students. But there is a wide range of variation across systems including systems where the percentage of white students range from zero to 100%, and Hispanic percentages range from zero to 36%. The range of economically disadvantaged students is just as wide across the districts (Rubenstein & Sjoquist, 2003).

Further complicating the issue of equitable funding is the fact that there is no single standard that applies across states or districts as to the absolute cost of an adequate education (Baker, 2005). Baker (2004) also noted that there are fringe populations, defined as at risk, English language learners, and gifted students who are often treated with marginal adjustments to general funding calculations rather than the funding that is required to meet their educational needs. He further stated that “there remains much scrutiny over the reliability of current methods for estimating either the absolute or relative costs of education (Baker, 2004, p.51). Interestingly enough, educational dollars expended for instruction remains at 61%, the exact same level it has remained at for the past 50 years (Odden, n.d.).

Funding for education in Georgia, like most other states, is derived from state and local taxes. Whereas funding inequities exists across states due to differences in state funding allotments, funding inequities among Georgia school districts exists primarily due to differing local tax either in the tax revenue base or tax burden placed on the

general public (Montello, 2010). In 2006, Georgia public school systems received 7.40% of their funding from federal funds, 51.26% of their funding from state funds, and 41.34% of their funding from local funds (Georgia School Superintendents Association [GSSA], 2006). This compares to 2002 when Georgia public school systems received 6% from federal funds, 56% from state funds, and 38% from local funds (Rubenstein & Sjoquist, 2003). The Georgia School Funding Association (2011) showed that Georgia public school systems received 50.1% from state and federal funds and 49.9% from local funds in 2010.

Local school districts are required to levy a minimum of five mills local taxable property for education but may levy as much as 20 mills. A mill is \$1 of tax for every \$1,000 of assessed property value. This is the district's "local fair share." Assessed value of a property is calculated by multiplying .40 times the appraised property value to produce the assessed value. GSSA explained that Quality Basic Education Act [QBE] which was enacted in 1985 is the formula used to earn funds and that approximately 90% of QBE funds go to pay salaries (GSSA, 2006; Rubenstein & Sjoquist, 2003). The QBE formula is derived from the number of full time equivalents [FTEs] which is defined as the number of students who are enrolled in each class (segment) during a school day.

Economic Downturn

Beginning with fiscal year [FY] 2003, the state of Georgia began a series of austerity cuts in funding. Between 2003 and 2009, these reductions decreased funding for local systems by more than \$2 million as well as across the board reductions in the QBE formula totaling \$250 million per year (Georgia School Funding Association [GSFA], 2009). Additional decreases in funding have included a 3% cut to FY 2010

fiscal budget (Tharpe, 2010), and a 5.5% cut relative to the FY 2010 fiscal budget for FY 2011 (Johnson, Oliff, & Williams, 2011). While all of these cuts were happening at the state level, revenue has continued to shrink for local governments as property tax collections drop and properties values drop (Jones, 2010).

Despite calls for more instructional time (AASL et al, 2007; Chen, 2006; CSBA, 2007; Dillon, 2011; Lavy, 2009; Resnick, 2007), the current economic concerns of federal, state, and local education systems are not supporting this endeavor. Instead, the economic situation is forcing many school systems to cut staffs, cut summer and after school programs, decrease student days, and decrease teacher planning/preparation days (Asheville City Schools, n.d.; Coffield, 2011; Dillon, 2011; Kober & Rentner, 2011). Dillon (2011) cites a spokesman for the federal Department of Education saying, “We’ve been pushing back against efforts to shorten not just the school day but the week and year . . . we’re trying to prevent what exists now from shrinking any further” (para.3).

According to McMurrer (2008), approximately 70% of all school districts experienced financial cuts in FY2011, with that percentage predicted to grow to 84% in FY2012. Many of those districts compensated for decreased funding through staff cuts. Approximately 61% of the districts predicted staff cuts although expectations were that this figure would rise. Other reductions included cuts in instructional materials, professional learning activities, technology and/or equipment, facilities maintenance, student support services, extracurricular activities, and instructional time. All types of districts, urban, suburban, and rural were affected. Approximately 66% of districts indicated that they would be postponing or stopping reform initiatives such as afterschool programs. Kober and Rentner (2011) also issued a dire warning that “federal and state

governments must recognize that if deep cuts are made in education, this will stall the very actions that are most likely to boost our economic situation in the future” (p. 15).

Balancing Instructional Time and Economic Downturn

States and school districts are being forced to compromise progress toward initiatives and make tough decisions to maintain their current status (Asheville City Schools, 2011; Belmont Public Schools, n.d.; Fuoco, 2011; PSEA, 2010; Warren, 2011). The Imua Alliance is asking the Hawaii State School Board to consider slowing down plans to increase instructional time, estimating that the planned increases will cost between \$45 million to \$55 million to “ensure that the state’s budget and teachers’ pocketbooks are not further crippled” (Vorsino, 2011, para. 20). The Belmont school system of Massachusetts is enacting Wednesday early release days to provide for professional learning. This is being accomplished by adding 10 minutes of instructional time to the other days of the week (Belmont Public Schools, n.d.). In response to a state mandate to increase the school calendar by five days, Asheville, North Carolina, city schools will increase instructional time by 30 minute per day (Asheville City Schools, 2011). Chicago City Schools will cut instructional time by 30 minutes per day but plan to use this time for breakfast which will actually increase their budget by \$41 million (Warren, 2011). The Pennsylvania State Education Association is working to continue their reform initiatives through maximizing current instructional time and professional planning time while working with community partners to support extended day or year programs (Pennsylvania State Education Association, 2010). Although the West Allegheny school district is predicted to lose approximately \$850,000 this year, they will continue with plans to add an additional day for students, three additional days for

teachers, and fifteen minutes to the teacher work day. Part of their plan to financially support this is through increased contributions to employee health care contributions (Fuoco, 2011).

Chute (2010) reported an emphasis on maximizing instructional time, “fighting and clawing for every instructional minute we can get” (para. 15). At the same time, Dillon (2011) reported that “untold numbers of schools nationwide have reduced their hours and days, often by furloughing teachers” (para. 8). He also cited teachers in Brandon, South Dakota who were working without pay to keep special programs going while some states such as North Carolina raised minimum instructional days but neglected to provide the funding to finance the initiative.

According to the Georgia Department of Education (2010), Georgia has redefined its original 180 day student calendar as minutes of instruction which require 48,600 minutes of instruction in kindergarten through third grade, 54,000 minutes in fourth and fifth grades, and 59,400 minutes in sixth through twelfth grade. This allows local systems flexibility to set their own duration and number of student days. They also reported increased class size allowances and cuts in state funding for multiple programs including professional learning activities and instructional materials.

Summary

There is no doubt that the economic downturn plaguing the United States is impacting its education system. In many instances, instructional time has been directly impacted through shrinking school calendars; what may not be so obvious is the impact the decreased budget has had as a result of decreased resources and school staffs which may include fewer professional learning opportunities, less collaborative planning and

teacher preparation time, increased class sizes, increased teacher responsibilities, and a decrease in instructional resources. There is currently no evidence that financial relief is looming on the horizon for public education, yet children are still showing up to school every day expecting the best education that elementary classrooms have to offer. Society is dependent on its educators to figure out the most effective means of educating its children regardless of a declining economy. There have been few studies devoted to seeking what impact the declining economy is having on instructional time and teachers' ability to meet the instructional needs of their students. This study is important to both the education profession and society, as it provides a basis for determining the effects of the economy on a crucial aspect of education, elementary instruction.

CHAPTER 3

METHODS AND PROCEDURES

At the same time that federal and state leaders have been calling for increased instructional time, the United States has been undergoing an economic decline that has resulted in decreased education budgets. This decreased funding has resulted in fewer instructional days, fewer planning and professional learning days for teachers, and smaller school staffs among other significant cuts to education budgets. Research completed by the Center on Education Policy has predicted no end in sight and has suggested that 84% of public school systems will experience financial cuts during the 2011 school year (Kober & Rentner, 2011).

There have been numerous studies devoted to quantifying the importance of instructional time; however, the downward trend in the U.S. economy has brought forth a new and unstudied dynamic. While organizations such as the Center on Education, federal and state departments of education, and contributors to education journals are beginning to examine the financial cuts thrust upon public education, there appears to be a clear gap in information concerning the impact of this economic downturn on elementary instructional time and teachers' ability to meet the instructional needs of their students. This study has contributed to that knowledge base by exploring teachers' perceptions of the impact of reduced budgets on teachers' abilities to meet the instructional needs of their students.

Research Questions

The purpose of this study was to explore teacher perceptions of the impact of reduced school budgets on teachers' abilities to meet the instructional needs of their

students. The overarching research question of the study was: How do teachers meet the instructional needs of their students in times of reduced school budgets? The following questions served to clarify teacher perceptions as a means of answering this question:

1. What impact have reduced budgets had on instructional time?
2. What challenges have teachers encountered while trying to meet the instructional needs of their students?
3. What best practices have teachers used to compensate for decreased school budgets?

Research Design

A review of literature has shown that there is little data available which examines the effect of the economic downturn on elementary instruction. Because of the lack of data, this study investigated teacher perceptions of the impact of decreased financial resources on elementary teachers' ability to meet the instructional needs of their students.

A descriptive methodology was chosen because it allowed for an exploration of the factors that play a role in the phenomena (DeVaus, 2007). The design of the study was quantitative and non-experimental. The quantitative method allowed the researcher to collect predetermined data based on a finite set of questions to collect performance, attitude, observational, and/or census data. Statistical methodologies were used for interpreting results and drawing conclusions (Creswell, 2009). Because the use of a survey allowed the researcher to use a structured approach to data collection and analysis and to make comparisons (DeVaus, 2007), this study employed an author-designed survey in which participants self-reported perceptions.

Population

The survey population included elementary teachers within Georgia's First District Regional Educational Service Agency (FDRESA) region. Eighteen of the 180 public school systems in Georgia reside within this region. As shown in Table 3.1, FDRESA information and self-reported data available on system websites indicated that these systems operate 106 elementary schools with approximately 66,198 students in grades pre-kindergarten through grade 5 and 4,498 certified teachers (Appling County School System [ACSS], n.d.; Bulloch County School System [BCSS], n.d.; Bryan County Schools [BCS], n.d.; Camden County Schools [CCS], n.d.; Candler County School District [CCSD], n.d.; Savannah Chatham County Public School System [SCCPSS], n.d.; Effingham County Schools [ECS], n.d.; Evans County School System [EVCS], n.d.; First District Regional Educational Service Agency [FDRESA], 2012; Glynn County School System [GCSS], n.d.; Jeff Davis Schools [JDS], n.d.; Liberty County Schools [LCS], n.d.; Long County School System [LCSS], n.d.; McIntosh County Schools [MCS], n.d.; Screven County Schools [SCS], n.d.; Tatnall County Schools [TCS], n.d.; Toombs County School System [TCSS], n.d.; Vidalia City School District [VCSD], n.d.; Wayne County School System [WCSS], n.d.).

Table 3.1

Elementary Schools and Teachers Within Survey Population

School system	No. of elementary schools	No. of elementary teachers	Percent of FDRESA area
Appling County	4	123	3%
Bryan County	5	234	5%
Bulloch County	9	340	8%
Camden County	9	292	6%
Candler County	2	65	1%
Chatham County	32	1441	32%
Effingham	8	401	9%
Evans County	1	74	2%
Glynn County	10	431	10%
Jeff Davis County	2	96	2%
Liberty County	8	329	7%
Long County	1	53	1%
McIntosh County	2	51	1%
Screven County	1	58	1%
Tatnall County	3	129	3%
Toombs County	3	127	3%
Vidalia City	2	70	2%
Wayne County	5	184	4%
FDRESA	106	4,498	

As shown in Table 3.2, an analysis of the FDRESA region (FDRESA, 2012) indicated that the percentage of students considered to be economically disadvantaged as identified by their qualifying for free or reduced meals ranged from 39.52% to 80.48%. Fifteen of the 18 school systems have an economically disadvantaged population which made up more than 54% of the student population. The student population of the FDRESA region as a whole was less than 50% White with individual school system White populations ranging from 27.88% to 75.11%. The American Indian population was less than 1% for all school systems while Asian identified students made up from 0.21% to 2.17%. Hispanic student populations ranged from 1.41% to 23.83%, Black student populations ranged from 16.05% to 58.70%, and multi-racial student populations ranged from 1.11% to 8.75%. Analysis of these data clearly indicated that this region is influenced by at-risk factors of large minority and economically disadvantaged populations.

Table 3.2

FDRESA Regional Demographic Data

School system	American				Multi-racial		Free/reduced lunch
	Indian	Asian	Black	Hispanic	White		
Appling	0.08%	0.72%	23.35%	12.31%	2.23%	61.29%	65.80%
Bryan	0.17%	2.08%	16.66%	6.26%	3.84%	70.75%	39.52%
Bulloch	0.17%	2.17%	35.51%	4.96%	3.18%	53.79%	54.74%
Camden	0.43%	1.30%	23.95%	5.95%	5.61%	62.58%	48.75%
Candler	0.00%	0.91%	29.52%	16.72%	2.66%	50.20%	71.57%
Chatham	0.19%	1.89%	58.70%	5.58%	5.64%	27.88%	64.31%
Effingham	0.19%	0.78%	15.53%	4.57%	3.67%	75.11%	44.96%
Evans	0.15%	0.50%	36.09%	18.37%	1.90%	42.99%	78.83%
Glynn	0.29%	1.27%	36.12%	9.42%	3.60%	49.11%	62.53%
Jeff Davis	0.12%	0.54%	16.05%	16.11%	1.51%	65.66%	67.59%
Liberty	0.51%	1.61%	50.18%	10.38%	6.68%	30.03%	63.45%
Long	0.31%	0.53%	27.16%	12.11%	8.75%	50.82%	67.21%
McIntosh	0.11%	0.65%	42.16%	1.67%	2.48%	52.93%	75.93%
Screven	0.04%	0.11%	52.16%	1.41%	1.11%	45.17%	80.01%
Tatnall	0.12%	0.42%	25.03%	19.00%	2.37%	52.98%	74.62%
Toombs	0.84%	0.21%	18.07%	23.83%	2.77%	54.28%	80.48%
Vidalia City	0.07%	0.81%	47.97%	2.44%	1.66%	46.98%	65.07%
Wayne	0.28%	0.46%	22.75%	6.47%	3.36%	66.64%	66.49%

Region	0.25%	1.37%	38.08%	7.85%	4.40%	47.89%	60.78%
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Note. Data represented was collected and produced by FDRESA (2012).

Every school system within the FDRESA region has been impacted to varying degrees by decreased educational funds (GSFA, 2011). How each system has managed that decrease in funding varied. One example of this variance was seen in the decrease in the number of personnel reported between 2009 and 2011. As shown in table 3.3, the Governor’s Office of Student Achievement [GOSA], (n.d.) indicated that 17 of the 18 school systems saw decreases in the number of certified personnel ranging from 2% to 17%. Another example of this variance was seen in the number of instructional and contracted days for certified teachers that have been deleted from school calendars. Table 3.3 also indicates that for school year 2012, 9 of the 18 school systems saw a decrease in the number of instructional days with this decrease varying from 2 to 10 days. Of these same 18 school systems, 11 indicated that there had been decreases in the number of contracted days for teachers with this amount ranging from 4 to 9 days (Smith, 2013).

Table 3.3

Cuts to Instructional / Contracted Days / Certified Personnel

School system	2012 Instructional days cut for students*	2012 Contracted days cut for teachers*	% Decrease in certified personnel - 2009 to 2011**
Appling	10	0	8%
Bryan	0	0	5%
Bulloch	2	5	7%
Camden	6	6	12%
Candler	Unavailable	Unavailable	2%
Chatham	0	0	4%
Effingham	0	0	6%
Evans	0	4	5%
Glynn	2	6	14%
Jeff Davis	2	5	8%
Liberty	0	0	9%
Long	0	4	+5%
McIntosh	6	0	9%
Screven	10	5	17%
Tatnall	4	9	5%
Toombs	Unavailable	Unavailable	5%

Vidalia City	Unavailable	Unavailable	6%
Wayne	5	8	11%

**Note.* Data represented was collected and produced by Smith (2013).

***Note.* Data represented was collected and produced by GOSA (n.d.).

Participants

Based on an analysis of (1) decreases in certified personnel, (2) decreases in instructional days, and (3) greatest cuts in the number of contracted days for certified staff as well as consideration of other sources for funding or instructional support that may have been available to local school systems, five school systems were chosen for the focus of this research. Those systems chosen included Appling County, McIntosh County, Screven County, Tattnall County, and Wayne County. Of these five systems, the administrators of three systems, Appling County, McIntosh County and Screven County, chose not to allow the researcher to contact their teachers. Certified teachers at each of the elementary schools within the remaining systems were invited to participate. Because of the differing dynamics across grade bands of instruction, the researcher chose to focus on one specific grade band – elementary. Following approval from system superintendents and the Georgia Southern University Internal Review Board, the researcher contacted school principals and arranged to meet with their certified staffs to invite their participation in the survey. The opportunity to share their perceptions of the impact of the economy on instruction as well as an opportunity to receive information about how other teachers within their region responded encouraged teachers to participate.

Sample

Sprinthall (2007, pp. 144) explains that “a good, representative sample provides the researcher with a miniature mirror with which to view the entire population.” With this in mind, the researcher chose not to use a random sampling but rather chose to use a deliberately non-random sampling based on an analysis of decreases in certified personnel, decreases in instructional days, decreases in the number of contracted days for certified staff and consideration of other sources for funding or instructional support that may be available to local school systems. Five school systems were chosen for the focus of this research with two of those systems agreeing to participate. Participating systems included Tattnall County, and Wayne County. Certified teachers at each of the elementary schools in Tattnall County were invited to participate in this study. Elementary teachers at four of the five Wayne County schools were invited to participate as teachers at the fifth school had previously participated in the pilot study for the survey instrument. The anticipated number of teachers invited to participate was 278; the actual number participating was 167. Response rate was 60%.

Instrumentation

Data was collected using a five part survey: minimal demographic data, a survey of how school budgets have affected instruction, a survey of challenges encountered as a result of reduced school budgets, a survey of best practices that were effective in compensating for decreased instructional time, and a final section which provided teachers with an opportunity to share any other aspects of the impact of reduced school budgets that they survey did not address.

Demographic Survey

The demographic portion of the survey asked participants to identify years of teaching experience and to rate the extent their classrooms have been affected by reduced school budgets. These questions were mapped to the research and to the research questions as shown in table 3.4.

Table 3.4

Demographic Survey Mapped to Literature Review

Survey Item	Literature Review	Research Question
Years of teaching experience	Creswell, 2009	
To what extent as your classroom been affected by a reduced school budget?	Creswell, 2009	1

Impact of Reduced School Budgets on Classroom Instruction

Section II of the survey contained nine questions which asked participants to respond to statements concerning the effect of reduced school budgets on their classroom instruction using a 4 point Likert scale. A Likert scale “a scaling method developed by Renis Likert which typically uses attitude statements using the standardized ‘strongly agree, agree, disagree, and strongly disagree’ format” (DeVaus, 2007, pp. 360). The response options included strongly disagree, disagree, agree, strongly agree. Response time for this portion of the survey was less than 5 minutes. The questions were mapped to the research and to the research questions as shown in table 3.5

Table 3.5

Impact Survey Mapped to Literature Review

Survey Item	Literature Review	Research Question
I had fewer instructional supplies.	Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
I had an increased class size.	Baker, 2004, 2005; Coates, 2003; Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
My daily workload has increased due to increased class size.	Baker, 2004, 2005; Coates, 2003; Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
My preparation time has increased due to increased class size.	Baker, 2004, 2005; Coates, 2003; Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
My paid planning time has decreased.	Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
My workload has increased due to increased duties/responsibilities.	Coffield, 2011; Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
The amount of time devoted to instruction has decreased due to less student instructional days.	Baker, 2004, 2005; Coates, 2003; Dillon, 2011; Kober, 2011; McMurrer, 2008; Odden, 2003; Odden et al., 2005	1
Time for collaborative planning with other teachers has decreased.	Baker, 2004, 2005; Kober, 2011; Odden, 2003; Odden et al., 2005	1
Opportunities for professional learning which helps me meet the needs of my students have decreased.	Baker, 2004, 2005; Kober, 2011; Odden, 2003; Odden et al., 2005	1

Challenges Encountered

Section III of the survey contained nine questions which asked participants to respond to statements concerning the challenges encountered while trying to meet the instructional needs of their students using a 4 point Likert scale. The response options included Strongly Disagree, Disagree, Agree, Strongly Agree. Response time for this portion of the survey was less than 5 minutes. The questions were mapped to the research and to the research questions as shown in table 3.6

Table 3.6

Survey of Challenges Encountered Mapped to Literature Review

Survey Item	Literature Review	Research Question
I have felt more stress about meeting the needs of at-risk students as a result of increased class sizes.	Baker, 2004, 2005; Coates, 2003; Kober, 2011; Odden, 2003; Odden et al., 2005	2
I felt obligated to use more of my own personal time to plan for instruction.	Coffield, 2011; Kober, 2011; Odden, 2003; Odden et al., 2005	2
I felt pressured to use more of my personal money for instructional supplies.	Coffield, 2011; Kober, 2011; Odden, 2003; Odden et al., 2005	2
I felt obligated to use more of my own personal time for grading/assessing learning.	Coffield, 2011; Kober, 2011; Odden, 2003; Odden et al., 2005	2
I felt more isolated from other teachers than in previous years.	Kober, 2011; Odden, 2003; Odden et al., 2005	2
I had less time to work with individual students and/or small groups than in previous years.	Baker, 2004, 2005; Coates, 2003; Dillon, 2011; Kober, 2011; Odden, 2003; Odden et al., 2005	2
I had more difficulty following mandated curriculum and pacing guides than in previous years.	Coates, 2003; Dillon, 2011; Kober, 2011	2
I have had more difficulty implementing high impact learning strategies than in previous years.	Baker, 2004, 2005; Coates, 2003; Dillon, 2011; Kober, 2011; Odden, 2003; Odden et al., 2005	2
I have not felt as	Coates, 2003; Dillon, 2011;	2

comfortable implementing Kober, 2011
new learning strategies as in
previous years.

Best Practices

Section IV of the survey contained a list of 12 “best practices” which asked participants to respond to statements concerning their use of these research-based best practices to compensate for decreased instructional time using a 4 point Likert scale. The response options included Not at all, Rarely, Sporadically, and Consistently. Response time for this portion of the survey was less than 5 minutes. The questions were mapped to the research and to the research questions as shown in table 3.7

Table 3.7

Survey of Best Practices Mapped to Literature Review

Survey Item	Literature Review	Research Question
Activating prior knowledge	Hattie, 2009; Marzano, 2003; Payne, 2009	3
Building positive teacher-student relationships	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Classroom management	Hattie, 2009; Marzano, 2003; Payne, 2009	3
Cooperative learning	Hattie, 2009; Marzano, 2003; Payne, 2009	3
Formative assessments	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Higher order thinking	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Non-linguistic representations/concept mapping	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Providing specific and targeted feedback	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Student learning goals and expectations for learning	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Student use of summarizing	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3
Targeted vocabulary instruction	Hattie, 2009; Marzano, 2003; Payne, 2009;	3

	Schmoker, 2011	
Student writing about learning	Hattie, 2009; Marzano, 2003; Payne, 2009; Schmoker, 2011	3

Other Aspects of the Impact of Reduced School Budgets

DeVaus (2007) recommends keeping open-ended questions to a minimum and placing them close to the end of a survey. This survey made use of one open-ended question and placed it in the final section. This one question gave participants an opportunity to identify any other aspects of the impact of reduced budgets that the researcher did not consider. Response time for this portion of the survey was one minute or less. This question was mapped to the research and to the research questions as shown in table 3.8.

Table 3.8

Other Aspects of the Impact of Reduced School Budgets

Survey Item	Literature Review	Research Question
What other experiences, positive or negative, related to the impact of reduced school budgets would you like to share?	Creswell, 2009	1, 2, 3

Pilot Study

Because there were no previous studies that examined teacher perceptions of the impact of decreased resources on teachers’ ability to meet the instructional needs of their students, the researcher developed the survey used for this study. Creswell (2009) and

DeVaus (2007) explained that a pilot study must be conducted to ensure that meaningful inferences can be drawn from the data obtained. The pilot study also provided direction for improving directions, questions, and formats. DeVaus (2007) outlined the two step piloting process used by this researcher.

The first phase of the pilot included question development. Here, 10 educators and administrators were asked to assist in improving the test items. They were provided with multiple wording of the same questions and asked whether they would give the same answer to both forms and what suggestions they would give to ensure clarity of meaning. Because the questions in each section of the survey were formatted in the same manner, only two questions were chosen from each of sections one through four for question development. The researcher conducted the interviews with each of the respondents. Feedback from this phase of the pilot study informed the final structure of the questions.

The second phase of the pilot study evaluated the reliability of the items included in the survey. DeVaus (2007) explained that a reliable measurement is ascertained when the same results occur on repeated occasions; when participants answer the same way on repeated administrations. Twenty-three teachers from an elementary school in Wayne County participated in this phase of pilot testing. Respondents completed the same survey two times with a time span of 15 days between each administration. The correlation between the two sets of scores was calculated using the Pearson product-moment correlation to ensure a significant correlation. The researcher accepted a minimum correlation of significance at the 0.05 level. To complete this correlation, numerical ratings were assigned to answer choices for section I, question 2 with “none” equating to 0, “slightly” equating to 1, and “significant” equating to 2. Sections II and III

also required the assignment of a numerical rating scale. For these sections, “strongly disagree” equated to 0, “disagree” equated to 1, “agree” equated to 2, and “strongly agree” equated to 3. Due to its qualitative nature, Section V was not included in this portion of the pilot testing. Test-retest reliability results, shown in table 3.9, indicate correlations for survey items. Correlations ranged from 0.483 (correlation was significant at the 0.05 level) to 0.933 (correlation was significant at the 0.01 level); no survey item had a correlation which was significant at a level lower than 0.05 and therefore all items remained on the final version of the survey.

Table 3.9

Test-Retest Correlations

Section	Item	$r_{\text{test.retest}}$	Level of significance
I	2	0.586	0.01
II	1	0.553	0.01
II	2	0.719	0.01
II	3	0.635	0.01
II	4	0.483	0.05
II	5	0.678	0.01
II	6	0.503	0.05
II	7	0.896	0.01
II	8	0.684	0.01
II	9	0.757	0.01
III	1	0.511	0.05
III	2	0.503	0.05
III	3	0.503	0.05
III	4	0.549	0.01
III	5	0.604	0.01
III	6	0.776	0.01
III	7	0.731	0.01
III	8	0.544	0.01

III	9	0.524	0.05
IV	1	0.593	0.01
IV	2	0.771	0.01
IV	3	0.678	0.01
IV	4	0.566	0.01
IV	5	0.691	0.01
IV	6	0.668	0.01
IV	7	0.612	0.01
IV	8	0.847	0.01
IV	9	0.645	0.01
IV	10	0.794	0.01
IV	11	0.933	0.01
IV	12	0.763	0.01

**Note.* $R_{\text{test.retest}}$ = Pearson product-moment correlation coefficient; data represents correlation between survey administration one and survey administration two.

Data Collection

The researcher submitted an application and supporting documentation to the Georgia Southern University Internal Review Board (IRB) for approval before conducting any research associated with this study. Permission from system superintendents to allow their system's elementary teachers to participate was obtained as part of this process. A copy of the approval letter from IRB is included in Appendix A.

Once permission was granted, the researcher contacted principals in the systems where Superintendent approval had been obtained to establish a time for the researcher to

attend a faculty meeting. At that meeting teachers were provided with information about the survey, including an explanation of the purpose, the types of information included, and the amount of time they could expect to spend taking the survey. The researcher explained that participation was completely self-selected and that there was no demographic information to identify either the individual or the school system they worked in. Following this explanation, participants were given a choice of either receiving and completing a survey or leaving without completing the survey. Completed surveys were collected as teachers left the meeting.

Data Analysis

Using question I.1 of the demographics section to filter out teachers with less than three years of experience, only results from teachers with three or more years of experience were used. Fourteen completed surveys indicated teachers with less than three years teaching experiences. These 14 surveys were not used, 153 surveys remained for analysis. The average mean years of experiences for these participants were 14.7 years, with experiencing ranging from 3 to 40 years. Descriptive statistics through the use of Statistical Package for Social Sciences (SPSS), Version 22 was used to analyze data.

Descriptive analysis was used to examine and describe each item through the use of frequencies, percentages, mean scores, and standard deviation. Frequency tables statistics tables and bar graphs were used to present results of the survey (DeVaus, 2007).

The final survey question provided participants with an opportunity to identify other aspects of the impact of reduced budgets that were not included in the survey. This

question was descriptive in nature; content analysis was used to identify patterns and themes.

Summary

The purpose of this study was to explore teacher perceptions of the impact of reduced school budgets on teachers' abilities to meet the instructional needs of their students. Following a two-stage piloting process which included question development and an assessment of test-retest reliability, an author-designed survey was administered to elementary teachers in three First District RESA school systems. These systems were chosen based on data indicating decreases in certified personnel, decreases in instructional days, decreases in the number of contracted days for certified staff, the lack of other sources for funding or instructional support that may be available to local school systems, and administrative approval.

Following survey administration, descriptive analysis was used to examine and describe each variable through the use of frequencies, mean score ranges and standard deviation. To make these computations possible, numerical ratings were assigned to answer choices for section I, question 2 with "none" equating to 0, "slightly" equating to 1, and "significant" equating to 2. Sections II and III also required the assignment of a numerical rating scale. For these sections, "strongly disagree" equated to 0, "disagree" equated to 1, "agree" equated to 2, and "strongly agree" equated to 3. Section IV required the researcher to code responses following data collection. The coding scheme was developed based on responses attained (DeVaus, 2007). Results were presented through the use of frequency tables and bar graphs

Item Analysis

Table 3.10

Item Analysis

Effect of reduced school budgets	Challenges teachers have encountered while trying to meet the instructional needs of students	Best practices used by teachers to compensate for decreased school budgets
II-1, II-2, II-3, II-4, II-5, II-6, II-7, II-8, II-9, V-1	III-1, III-2, III-3, III-4, III-5, III-6, III-7, III-8, III-9, V-1	IV-1, IV-2, IV-3, IV-4, IV-5, IV-6, IV-7, IV-8, IV-9, IV-10, IV-11, IV-12, V-1

CHAPTER 4

REPORT OF DATA AND DATA ANALYSIS

Decreased funding for education has continued to impact school system across the United States. In some systems this funding decrease has resulted in fewer instructional days, fewer planning and professional learning days for teachers, and smaller school staffs among other cuts. The purpose of this study has been to examine elementary teachers' perceptions of the impact of reduced budgets on teachers' abilities to meet the instructional needs of their students.

Teachers in three southeastern school systems were invited to participate in the gathering of survey data. The systems were chosen based on data indicating decreases in certified personnel, decreases in instructional days, decreases in the number of contracted days for certified staff, the lack of other sources for funding or instructional support that may be available to local school systems, and administrative approval. Following survey administration, descriptive analysis was used to examine and describe each variable through the use of frequencies, percentages, mean score and standard deviation.

Research Questions

The purpose of this study was to explore teacher perceptions of the impact of reduced school budgets on teachers' abilities to meet the instructional needs of their students. The following questions were presented to address the overarching research question of the study: how do elementary teachers meet the instructional needs of their students in times of reduced school budgets?"

1. What effect have reduced budgets had on elementary instructional time?

2. What challenges have elementary teachers encountered while trying to meet the instructional needs of their students?
3. What best practices have elementary teachers used to compensate for decreased school budgets?

Research Design

A descriptive methodology was chosen because it allowed for an exploration of the factors that play a role in the phenomena (DeVaus, 2007). The design of the study was quantitative and non-experimental. The quantitative method allowed the researcher to collect predetermined data based on a finite set of questions to collect performance, attitude, observational, and/or census data. Statistical methodologies were used for interpreting results and drawing conclusions (Creswell, 2009). Because the use of a survey allowed the researcher to use a structured approach to data collection and analysis to draw causal inferences and make comparisons (DeVaus, 2007), this study employed an author-designed survey to gather the data.

Findings

What Impact Have Reduced Budgets Had on Instructional Time?

Ninety-five percent of survey respondents indicated that reduced school budgets had affected their classrooms. Of these respondents, 76 indicated that the effect had been slight while 63 indicated that the effect had been significant.

Table 4.1

Effect on Classrooms

Response	Frequency	Percent	Valid percent	Cumulative percent
None	7	4.6	4.8	4.8
Slight	76	49.7	52.1	56.8
Significant	63	41.2	43.2	100.0

**Note.* None = 0
 Slight = 1
 Significant = 2

Statistics

N	146
Missing	7
Mean	1.3836
Standard Deviation	.57847

Section II required participants to respond to nine statements regarding specific ways in which their instruction had been affected; they were asked to rate their agreement with the statements using a 4point Likert scale ranging from strongly disagree to strongly agree. A summary of responses to each of the nine statements follows.

Responses to the statement, “I had fewer instructional supplies,” indicated that two respondents strongly disagreed, 33 disagreed, 70 agreed and 44 strongly agreed.

Table 4.2

Fewer Instructional Supplies

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	2	1.3	1.3	1.3
Disagree	33	21.6	22.1	23.5
Agree	70	45.8	47.0	70.5
Strongly Agree	44	28.8	29.5	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	149
Mean	2.0470
Standard Deviation	.75637

Responses to the statement, “I had an increased class size,” indicated that three respondents strongly disagreed, 23 disagreed, 54 agreed and 69 strongly agreed.

Table 4.3

Increased Class Size

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	3	2.0	2.0	2.0
Disagree	23	15.0	15.4	17.4
Agree	54	35.3	36.2	53.7
Strongly Agree	69	45.1	46.3	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	149
Mean	2.2685
Standard Deviation	.79382

Responses to the statement, “My work load has increased due to the increased class size,” indicated that three respondents strongly disagreed, 18 disagreed, 56 agreed and 72 strongly agreed.

Table 4.4

Increased Work Load

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	3	2.0	2.0	2.0
Disagree	18	11.8	12.1	14.1
Agree	56	36.6	37.6	51.7
Strongly Agree	72	47.1	48.3	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	149
Mean	2.3221
Standard Deviation	.76466

Responses to the statement, “My preparation time has increased due to the increased class size,” indicated that three respondents strongly disagreed, 21 disagreed, 63 agreed and 64 strongly agreed.

Table 4.5

Increased Preparation Time

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	3	2.0	2.0	2.0
Disagree	21	13.7	13.9	15.9
Agree	63	41.2	41.7	57.6
Strongly Agree	64	41.8	42.4	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	151
Mean	2.2450
Standard Deviation	.76565

Responses to the statement, “My paid planning time has decreased,” indicated that three respondents strongly disagreed, 33 disagreed, 49 agreed and 68strongly agreed.

Table 4.6

Decreased Planning Time

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	3	2.0	2.0	2.0
Disagree	33	21.6	21.6	23.5
Agree	49	32.0	32.0	55.6
Strongly Agree	68	44.4	44.4	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	153
Mean	2.1895
Standard Deviation	.84099

Responses to the statement, “My work load has increased due to the increased duties/responsibilities,” indicated that one respondent strongly disagreed, 14 disagreed, 47 agreed and 91 strongly agreed.

Table 4.7

Increased Work Load

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	1	0.7	0.7	0.7
Disagree	14	9.2	9.2	9.8
Agree	47	30.7	30.7	40.5
Strongly Agree	91	59.5	59.5	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	153
Mean	2.4902
Standard Deviation	.68937

Responses to the statement, “The amount of time devoted to instruction has decreased due to fewer instructional days,” indicated that four respondents strongly disagreed, 35 disagreed, 70 agreed and 42 strongly agreed.

Table 4.8

Decreased Instructional Time

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	4	2.6	2.6	2.6
Disagree	35	22.9	23.2	25.8
Agree	70	45.8	46.4	72.2
Strongly Agree	42	27.5	27.8	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	151
Mean	1.9934
Standard Deviation	.78737

Responses to the statement, “Time for collaborative planning with other teachers has decreased,” indicates that one respondent strongly disagreed, 29 disagreed, 65 agreed and 56 strongly agreed.

Table 4.9

Decreased Collaborative Planning Time

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	1	0.7	0.7	0.7
Disagree	29	19.0	19.2	19.9
Agree	65	42.5	43.0	62.9
Strongly Agree	56	36.6	37.1	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	151
Mean	2.1656
Standard Deviation	.75216

Responses to the final statement in section I, addressing the statement, “Opportunities for professional learning which help me to meet the needs of my students have decreased,” indicated that zero respondents strongly disagreed, 40 disagreed, 68 agreed and 43 strongly agreed.

Table 4.10

Decreased Professional Learning Opportunities

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	0	0.0	0.0	0.0
Disagree	40	26.1	26.5	26.5
Agree	68	44.4	45.0	71.5
Strongly Agree	43	28.1	28.5	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	151
Mean	2.0199
Standard Deviation	.74360

Each of the statements in section II asked participants to rate their level of agreement concerning the affects of reduced school budgets. In order to compare participant responses across all items, means and standard deviations were calculated. Variance of means between the items ranged from 1.99 to 2.49 while standard deviations ranged from .68937 to .84099. The effect on workloads due to increased duties/responsibilities or increased class sizes indicated the largest mean scores while the

effect on instructional time and professional learning (Q9) indicated the lowest mean scores.

Table 4.11

Means and Standard Deviations for Instructional Effects

Survey item	Mean	Standard deviation
I had fewer instructional supplies.	2.05	.75637
I had an increased class size.	2.27	.79382
My daily workload has increased due to increased class size.	2.32	.76466
My preparation time has increased due to increased class size.	2.24	.76565
My paid planning time has decreased.	2.19	.84099
My workload has increased due to increased duties/responsibilities.	2.49	.68937
The amount of time devoted to instruction has decreased due to less student instructional days.	1.99	.78367
Time for collaborative planning with other teachers has decreased.	2.16	.75216
Opportunities for professional learning which helps me meet the needs of my students have decreased.	2.02	.74630

*Note. Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

What challenges have teachers encountered while trying to meet the instructional needs of their students?

Section III asked participants to rate their agreement with statements concerning challenges encountered as a result of reduced school budgets. Participants responded using a 4 point Likert scale ranging from strongly disagrees to agree. A summary of responses to each of the nine statements follows.

Responses to the statement, “I felt more stress related to meeting the needs of my at-risk students,” indicated that zero respondents strongly disagreed, 12 disagreed, 59 agreed and 78 strongly agreed.

Table 4.12

Increased Stress Levels

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	0	0.0	0.0	0.0
Disagree	12	7.8	8.1	8.1
Agree	59	38.6	39.6	47.7
Strongly Agree	78	51.0	52.3	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	149
Mean	2.4430
Standard Deviation	.64076

Responses to the statement, “I felt obligated to use more of my personal time to plan for instruction,” indicated that zero respondents strongly disagreed, 3 disagreed, 45 agreed and 104 strongly agreed.

Table 4.13

Increased Use of Personal Time

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	0	0.0	0.0	0.0
Disagree	2	2.0	2.0	2.0
Agree	45	29.4	29.6	31.6
Strongly Agree	104	68.0	68.4	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	152
Mean	2.6645
Standard Deviation	.51396

Responses to the statement, “I felt pressured to use more of my own personal money for instructional supplies,” indicated that one respondent strongly disagreed, 18 disagreed, 48 agreed and 83 strongly agreed.

Table 4.14

Increased Use of Personal Monies

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	1	0.7	0.7	0.7
Disagree	18	11.8	12.0	12.7
Agree	48	31.4	32.0	44.7
Strongly Agree	83	54.2	55.3	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	150
Mean	2.4200
Standard Deviation	.72603

Responses to the statement, “I felt obligated to use more of my own personal time for grading/assessing learning,” indicated that zero respondents strongly disagreed, eight disagreed, 41 agreed and 102 strongly agreed.

Table 4.15

Increased Use of Personal Time for Student Assessment

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	0	0.0	0.0	0.0
Disagree	8	5.2	5.3	5.3
Agree	41	26.8	27.2	32.5
Strongly Agree	102	66.7	67.5	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	151
Mean	2.6225
Standard Deviation	.58585

Responses to the statement, “I felt more isolated from other teachers than in previous years,” indicated that zero respondents strongly disagreed, 59 disagreed, 48 agreed and 42 strongly agreed.

Table 4.16

Increased Feelings of Isolation

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	0	0.0	0.0	0.0
Disagree	59	38.6	39.6	38.8
Agree	48	31.4	32.2	65.9
Strongly Agree	42	27.5	28.2	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	149
Mean	1.8859
Standard Deviation	.81812

Responses to the statement, “I had less time to work with individual students and/or small groups than in previous years,” indicated that one respondent strongly disagreed, 36 disagreed, 57 agreed and 57 strongly agreed.

Table 4.17

Decreased Time for Working with Individuals and Small Groups

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	1	0.7	0.7	0.7
Disagree	36	23.5	23.8	24.5
Agree	57	37.3	37.7	62.3
Strongly Agree	57	37.3	37.7	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	151
Mean	2.1258
Standard Deviation	.79418

Responses to the statement, “I had more difficulty following mandated curriculum and pacing guides than in previous years,” indicated that zero respondents strongly disagreed, 55 disagreed, 66 agreed and 29 strongly agreed.

Table 4.18

Increased Difficulty Following Curriculum and Pacing Guides

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	0	0.0	0.0	0.0
Disagree	55	35.9	36.7	36.7
Agree	66	43.1	44.0	80.7
Strongly Agree	29	19.0	19.3	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	150
Mean	1.8267
Standard Deviation	.73402

Responses to the statement, “I had more difficulty implementing high impact learning strategies than in previous years,” indicated that one respondent strongly disagreed, 53 disagreed, 69 agreed and 26 strongly agreed.

Table 4.19

Increased Difficulty Implementing High Impact Learning Strategies

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	1	0.7	0.7	0.7
Disagree	53	34.6	35.6	36.2
Agree	69	45.1	46.3	82.6
Strongly Agree	26	17.0	17.4	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	149
Mean	1.8054
Standard Deviation	.72296

Responses to the statement, “I have not felt as comfortable implementing new learning strategies as in previous years,” indicated that two respondents strongly disagreed, 65 disagreed, 68 agreed and 15 strongly agreed.

Table 4.20

Discomfort Implementing New Learning Strategies

Response	Frequency	Percent	Valid percent	Cumulative percent
Strongly Disagree	2	1.3	1.3	1.3
Disagree	65	42.5	43.3	44.7
Agree	68	44.4	45.3	90.0
Strongly Agree	15	9.8	10.0	100.0

**Note.* Strongly Disagree = 0
 Disagree = 1
 Agree = 2
 Strongly Agree = 3

Statistics

N	150
Mean	1.6400
Standard Deviation	.67833

Each of the statements in section III asked participants to rate their level of agreement concerning challenges encountered due to reduced school budgets. In order to compare participant responses across all items, means and standard deviations were calculated for each item. Variance between means varied from 1.64 to 2.62 with standard deviations ranging from .58585 to 1.81812. The feeling of obligation to use personal time to plan for learning and student assessment and the pressure to use own

personal money to purchase instructional supplies indicated the largest mean scores while discomfort implementing new learning strategies and difficulty implementing high impact learning strategies indicated the lowest mean scores.

Table 4.21*Means and Standard Deviations for Challenges Encountered*

Survey item	Mean	Standard deviation
I have felt more stress about meeting the needs of at-risk students as a result of increased class sizes.	2.44	.64076
I felt obligated to use more of my own personal time to plan for instruction.	2.66	.51396
I felt pressured to use more of my personal money for instructional supplies.	2.42	.72063
I felt obligated to use more of my own personal time for grading/assessing learning.	2.62	.58585
I felt more isolated from other teachers than in previous years.	1.89	.81812
I had less time to work with individual students and/or small groups than in previous years.	2.13	.79418
I had more difficulty following mandated curriculum and pacing guides than in previous years.	1.83	.73402
I have had more difficulty implementing high impact learning strategies than in previous years.	1.81	.72296
I have not felt as comfortable implementing new learning strategies as in previous years.	1.64	.67833

*Note. Strongly Disagree = 0

Disagree = 1

Agree = 2

Strongly Agree = 3

What best practices have teachers used to compensate for decreased instructional time?

Section IV of the survey contained a list of 12 instructional strategies which asked participants to respond to statements concerning their use of high-yield research-based best practices to compensate for decreased instructional time using a 4 point Likert scale. The response options included Not at all, Rarely, Sporadically, and Consistently. A summary of responses to each of the 12 strategies follows.

Responses to the use of activating prior learning indicated that three respondents never use the strategy, 12 use the strategy rarely, 50 use the strategy sporadically, and 83 use the strategy consistently.

Table 4.22

Respondent Use of Activating Prior Learning

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	3	2.0	2.0	2.0
Rarely	12	7.8	8.1	10.1
Sporadically	50	32.7	33.8	43.9
Consistently	83	54.2	56.1	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	148
Mean	2.4392
Standard Deviation	.73054

Responses to the use of building relationships with students indicated that two respondents never use the strategy, 10 use the strategy rarely, 29 use the strategy sporadically, and 109 use the strategy consistently.

Table 4.23

Respondent Use of Building Relationships with Students

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	2	1.3	1.3	1.3
Rarely	10	6.5	6.7	8.0
Sporadically	29	19.0	19.3	27.3
Consistently	109	71.2	72.7	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	150
Mean	2.6333
Standard Deviation	.66974

Responses to the use of classroom management strategies indicated that two respondents never use the strategy, seven use the strategy rarely, 37 use the strategy sporadically, and 105 use the strategy consistently.

Table 4.24

Respondent Use of Classroom Management Strategies

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	2	1.3	1.3	1.3
Rarely	7	4.6	4.6	6.0
Sporadically	37	24.2	24.5	30.5
Consistently	105	68.6	69.5	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	151
Mean	2.6225
Standard Deviation	.64023

Responses to the use of cooperative learning strategies indicated that two respondents never use the strategy, 13 use the strategy rarely, 74 use the strategy sporadically, and 2 use the strategy consistently.

Table 4.25

Respondent Use of Cooperative Learning Strategies

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	2	1.3	1.3	1.3
Rarely	13	8.5	8.6	9.9
Sporadically	74	48.4	49.0	58.9
Consistently	62	40.5	41.1	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	151
Mean	2.2980
Standard Deviation	.68112

Responses to the use of formative assessments indicated that one respondent never uses the strategy, nine use the strategy rarely, 62 use the strategy sporadically, and 77 use the strategy consistently.

Table 4.26

Respondent Use of Formative Assessments

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	1	0.7	0.7	0.7
Rarely	9	5.9	6.0	6.7
Sporadically	62	40.5	41.6	48.3
Consistently	77	50.3	51.7	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	149
Mean	2.4430
Standard Deviation	.64076

Responses to the use of higher order thinking skills indicated that two respondents never use the strategy, 17 use the strategy rarely, 78 use the strategy sporadically, and 55 use the strategy consistently.

Table 4.27

Respondent Use of Higher Order Thinking Skills

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	2	1.3	1.3	1.3
Rarely	17	11.1	11.2	12.5
Sporadically	78	51.0	51.3	63.8
Consistently	55	35.9	36.2	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	152
Mean	2.2237
Standard Deviation	.69241

Responses to the use of nonlinguistic representations/concept maps indicated that seven participants never use the strategy, 19 use the strategy rarely, 61 use the strategy sporadically, and 64 use the strategy consistently.

Table 4.28

Respondent Use of Nonlinguistic Representations/Concept Maps

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	7	4.6	4.6	4.6
Rarely	19	12.4	12.6	17.2
Sporadically	61	39.9	40.4	57.6
Consistently	64	41.8	42.4	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	151
Mean	2.2053
Standard Deviation	.83521

Responses to the use of specific and targeted feedback indicated that four respondents never use the strategy, 10 use the strategy rarely, 88 use the strategy sporadically, and 49 use the strategy consistently.

Table 4.29

Respondent Use of Specific and Targeted Feedback

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	4	2.6	2.6	2.6
Rarely	10	6.5	6.6	9.3
Sporadically	88	57.5	58.3	67.5
Consistently	49	32.0	32.5	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	151
Mean	2.2053
Standard Deviation	.67644

Responses to the use of student learning goals indicated that two respondents never use the strategy, 14 use the strategy rarely, 47 use the strategy sporadically, and 87 use the strategy consistently.

Table 4.30

Respondent Use of Student Learning Goals

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	2	1.3	1.3	1.3
Rarely	14	9.2	9.3	10.7
Sporadically	47	30.7	31.3	42.0
Consistently	87	56.9	58.0	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	150
Mean	2.4600
Standard Deviation	.72009

Responses to the use of summarization indicated that two respondents never use the strategy, 18 use the strategy rarely, 75 use the strategy sporadically, and 54 use the strategy consistently.

Table 4.31

Respondent Use of Summarization by Students

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	2	1.3	1.3	1.3
Rarely	18	11.8	12.1	13.4
Sporadically	75	49.0	50.3	63.8
Consistently	54	35.3	36.2	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	149
Mean	2.2148
Standard Deviation	.70293

Responses to the use of contextual vocabulary instruction indicated that seven respondents never use the strategy, 16 use the strategy rarely, 70 use the strategy sporadically, and 57 use the strategy consistently.

Table 4.32

Respondent Use of Contextual Vocabulary Instruction

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	7	4.6	4.7	4.7
Rarely	16	10.5	10.7	15.3
Sporadically	70	45.8	46.7	62.0
Consistently	57	37.3	38.0	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	150
Mean	2.1800
Standard Deviation	.80327

Responses to the use of integrated writing assignments indicated that nine respondents never use the strategy, 24 use the strategy rarely, 71 use the strategy sporadically, and 46 use the strategy consistently.

Table 4.33

Respondent Use of Integrated Writing Assignments

Response	Frequency	Percent	Valid percent	Cumulative percent
Not At All	9	5.9	6.0	6.0
Rarely	24	15.7	16.0	22.0
Sporadically	71	46.4	47.3	69.3
Consistently	46	30.1	30.7	100.0

**Note.* Not At All = 0
 Rarely = 1
 Sporadically = 2
 Consistently = 3

Statistics

N	150
Mean	2.0267
Standard Deviation	.84303

Section IV asked participants to rate their use of 12 research based high yield best practices. In order to compare participant responses across all items, means and standard deviations for each identified strategy was calculated. Variance between the means ranged from 2.14 to 2.63 while standard deviations ranged from .64023 to .83521. The use of classroom management strategies and building relationships with students

indicated the largest mean scores while the use of integrated writing assignments and contextual vocabulary instruction indicated the lowest mean scores.

Table 4.34

Means and Standard Deviations for Instructional Strategies Implemented

Survey item	Mean	Standard deviation
Activating prior knowledge	2.44	.73054
Building positive teacher-student relationships	2.63	.66974
Classroom management	2.62	.64023
Cooperative learning	2.30	.68112
Formative assessments	2.44	.64076
Higher order thinking	2.22	.69241
Non-linguistic representations/concept mapping	2.20	.83521
Providing specific and targeted feedback	2.20	.67644
Student learning goals and expectations for learning	2.46	.72009
Student use of summarizing	2.21	.70293
Targeted vocabulary instruction	2.18	.80327
Student writing about learning	2.03	.84303

**Note.* Not at all = 0

Rarely= 1

Sporadically = 2

Consistently = 3

What best practices have teachers used to compensate for decreased instructional time?

The final survey question provided participants with an opportunity to identify other aspects of the impact of reduced budgets that were not included in the survey. Because this question was descriptive in nature, content analysis was used to identify patterns and themes. There were 124 separate comments. One hundred, twenty-two of these comments reinforced statements already addressed in other sections of the survey while two responses brought up a concern not addressed by the researcher, salary cuts and one response indicated a call for teachers to come together for the good of the students regardless of circumstances. The focus of the comments allowed for nine separate categories: too many students, not enough staff; not enough time to get everything done; not enough resources; increased need to use own time and/or money; too much stress; not able to meet student needs; low morale; salary cuts; and one declaration of need to come together for the good of the students regardless of circumstances.

Table 4.35

Participant Responses to Opportunity to Share

Response	Frequency	Percent
Low morale	6	4.8
Increase responsibility for using own time/money	21	16.9
Not enough resources	22	17.7
Not enough time to get everything done	21	16.9
Not meeting the needs of our students	16	12.9
Salary Cuts	2	1.6
Statement of need to come together for the good of students	1	0.8
Too many students, not enough staff	26	21.0
Too much stress	9	7.3

Note. N = 124.

Summary

This research sought to answer the question, how do teachers meet the instructional needs of their students in times of reduced school budgets. The following questions were used as the basis for answering this question:

1. What effect have reduced budgets had on elementary instructional time?
2. What challenges have elementary teachers encountered while trying to meet the instructional needs of their students?

3. What best practices have elementary teachers used to compensate for decreased school budgets?

Ninety-five percent of the teachers surveyed responded that reduced school budgets had affected their classrooms. Of this 95.2%, 43.2% indicated significant effect while 52.1% indicated slight effects and 4.8% indicated no effect at all. Survey responses show that the largest effects have been on workloads with 90.3% of the participants agreeing or strongly agreeing that workloads have increased due to increased duties/responsibilities. A decrease in instructional time was identified as the least affected item identified on the survey with 74.2% of respondents agreeing or strongly agreeing that instructional time had suffered due to reduced school budgets. The remaining survey items indicated respondent agreement or strong agreement ranging from 73.5% to 85.9%.

Participants identified feeling obligated to use more of their own personal time to plan for instruction as the largest challenge with 98% of the respondents agreeing or strongly agreeing. Discomfort implementing new learning strategies received the lowest scores with 55.3% agreeing or strongly agreeing. The remaining seven challenges indicated respondent agreement or strong agreement ranging from 63.6% to 94.7%.

When asked which of the research based best practices participants had used to compensate for decreased instructional time, the responses indicated that all strategies were being used sporadically by most participants. The most widely used strategies were classroom management strategies with 69.5% of participants using them consistently, and building relationships with students with 72.7% of participants using this strategy consistently. The strategy that was used with the least consistency was implementing

integrated writing assignments with 30.7% of participants using this strategy consistently. The use of the remaining strategies consistently ranged from 32.5% to 58%.

Through the use of these three questions, this study was able to answer the overarching question: how do teachers meet the instructional needs of their students in times of reduced school budgets. The analysis of information indicated that classroom instruction has been impacted by reduced school budgets; teachers reported that they are facing challenges related to reduced school budgets but are employing research based best practices to meet the needs of their students although mean responses indicate that the implementation of these strategies is within the sporadic range.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

At the same time that federal and state leaders have been calling for increased instructional time, the United States has been undergoing an economic decline that has resulted in decreased education budgets. This decreased funding has resulted in fewer instructional days, fewer planning and professional learning days for teachers, and smaller school staffs among other significant cuts to education budgets. Research completed by the Center on Education Policy has predicted no end in sight and has suggested that 84% of public school systems would experience financial cuts during the 2011 school year (Kober & Rentner, 2011).

There have been numerous studies devoted to quantifying the importance of instructional time; however, the downward trend in the U.S. economy has brought forth a new and unstudied dynamic. While organizations such as the Center on Education, federal and state departments of education, and contributors to education journals are beginning to examine the financial cuts thrust upon public education, there appears to be a clear gap in information concerning the impact of this economic downturn on elementary instructional time and teachers' ability to meet the instructional needs of their students. This study contributed to that knowledge base by exploring teacher perceptions of the impact of reduced budgets on teachers' abilities to meet the instructional needs of their students.

Analysis of Research Findings

This research sought to answer the question, how do teachers meet the instructional needs of their students in times of reduced school budgets. The following questions were used as the basis for answering this question:

1. What effect have reduced budgets had on elementary instructional time?
2. What challenges have elementary teachers encountered while trying to meet the instructional needs of their students?
3. What best practices have elementary teachers used to compensate for decreased instructional time?

Ninety-five percent of the teachers surveyed responded that reduced school budgets had affected their classrooms. Of this 95.2%, 43.2% indicated significant effect while 52.1% indicated slight effects and 4.8% indicated no effect at all. Survey responses show that the largest effects have been on workloads with 90.3% of the participants agreeing or strongly agreeing that workloads have increased due to increased duties/responsibilities. A decrease in instructional time was identified as the least affected item identified on the survey with 74.2% of respondents agreeing or strongly agreeing that instructional time had suffered due to reduced school budgets. The remaining survey items indicated respondent agreement or strong agreement ranging from 73.5% to 85.9%.

Participants identified feeling obligated to use more of their own personal time to plan for instruction as the largest challenge with 98% of the respondents agreeing or strongly agreeing. Discomfort implementing new learning strategies received the lowest scores with 55.3% agreeing or strongly agreeing. The remaining seven challenges indicated respondent agreement or strong agreement ranging from 63.6% to 94.7%.

When asked which of the research based best practices participants had used to compensate for decreased instructional time, the responses indicated that all strategies were being used sporadically by most participants. The most widely used strategies were classroom management strategies with 69.5% of participants using them consistently, and building relationships with students with 72.7% of participants using this strategy consistently. The strategy that was used with the least consistency was implementing integrated writing assignments with 30.7% of participants using this strategy consistently. The use of the remaining strategies consistently ranged from 32.5% to 58%.

Through the use of these three questions, this study was able to answer the overarching question: how do teachers meet the instructional needs of their students in times of reduced school budgets. The analysis of information indicated that classroom instruction has been impacted by reduced school budgets; teachers reported that they are facing challenges related to reduced school budgets but are employing research based best practices to meet the needs of their students although mean responses indicate that the implementation of these strategies is within the sporadic range.

Discussion of Research Findings

The literature review in chapter two provided the foundation for the construction of survey items from which the researcher could study the effect of reduced school budgets on elementary instruction. As established in chapter two, minimal studies have been devoted to the study of the economic downturn as it relates to classroom instruction. Table 5.1 provides a reference for linking the major questions of this research to the literature.

Table 5.1

Correlation of Research and Literature

Research Questions	Related Research
Effect of reduced school budgets on elementary instructional time	Baker Coates Coffield Dillon Chute Kober and Rentner Odden Odden et al.
Challenges teachers have encountered while trying to meet the instructional needs of students	CSBS Carlyle Coates Lavey Resnick Sankar
Best practices used by teachers to compensate for reduced school budgets	Hattie Marzano Payne Schmoker

The economic environment has forced many school systems to cut staffs, cut summer and after school programs, decrease student days, and decrease teacher planning/preparation days (Asheville City Schools, n.d.; Coffield, 2011; Dillon, 2011; Kober & Rentner, 2011). Other reductions included cuts in instructional materials, professional learning activities, technology and/or equipment, facilities maintenance, student support services, extracurricular activities, and instructional time (Kober & Rentner, 2011). Coates (2003) found that while effects of increasing instructional time were positive, the effectiveness of any increases in instructional time was adversely affected when class size was increased. Chute (2010) reported an emphasis on maximizing instructional time, “fighting and clawing for every instructional minute we can get” (para. 15). At the same time, Dillon (2011) reported that “untold numbers of schools nationwide have reduced their hours and days, often by furloughing teachers” (para. 8).

According to the Georgia Department of Education (2010), Georgia has redefined its original 180 day student calendar as minutes which allows local systems flexibility to set their own duration and number of student days. They also reported increased class size allowances and cuts in state funding for multiple programs including professional learning activities and instructional materials.

The school systems represented in this study have seen many of the same cuts as identified in the literature. The survey results indicate that they have also felt the same effects. Instructional time, planning time and professional learning opportunities have decreased while class sizes, teacher workloads, duties and responsibilities have increased. Open ended responses also recognized reductions in technology and resources. The

challenges identified by survey participants aligned with the effects of reduced school budgets identified above.

Studies indicate that the impact of increased or decreased instructional time is more pronounced for specific subgroups including economically disadvantaged students and minority populations (Carlyle, 2008; CSBA, 2007; Lavey, 2009; Resnick, 2007; Sankar, n.d.). The disparity between white and nonwhite populations may be the largest dilemma facing the U.S. public school system according to Oats (2005). Resnick (2007) found low-performing students, regardless of subgroup, to be most positively impacted by increased instructional time.

More than 90% of survey participants acknowledged stress related to meeting the needs of their at-risk students. Their ability to work with individual students and small groups was recognized as a challenge by 74.6% of participants. Open ended responses also acknowledged concerns related to not being able to meet the needs of their students, especially their at-risk students.

Multiple studies reiterate the need to simplify the smorgasbord of instructional strategies to those that have shown proven positive effects on student achievement. Marzano defined nine categories of instructional strategies which significantly impact student achievement. These strategies include identifying similarities and differences, summarizing note taking, reinforcing effort and providing recognition, homework and practice, nonlinguistic representations, cooperative learning, setting objectives and providing feedback, generating and testing hypotheses, questions, cues, and advanced organizers (Marzano, 2003; Marzano, Pickering, & Pollock, 2001). Marzano (2003) also

identified classroom management as a significant teacher-level factor affecting student achievement.

Hattie (2009) identified multiple best practices and classroom influences with an effect level of 0.40 or higher. These included classroom management, teacher-student relationships, professional development, setting expectations, advanced organizers, concept mapping, providing specific feedback and formative evaluation, higher order questioning, spaced vs. mass practice, peer tutoring, meta-cognitive strategies, study skills, self-verbalization/self-questioning, and specific vocabulary instruction

Schmoker (2011) confirmed the findings of Hattie (2009) and Marzano (2003). Payne (2009). She centered her research around students from poverty, has organized a set of strategies to positively affect student achievement. Among her recommendations were numerous strategies already identified by Marzano (2003) and Hattie (2009). These strategies included mental models, composing questions, self-talk, problem solving, graphic organizers and mental models, visual representations for vocabulary, self-assessment, tutoring, meta-cognitive processes, cooperative learning, classroom management, and building relationships.

These strategies informed section IV of the survey instrument. Survey results indicated that all strategies were being used by most participants, however, mean scores indicate the use of these practices was within the sporadic range. The most widely used strategies were classroom management strategies and building relationships with students, and activating prior learning. The strategies identified as being used with the least consistency were implementing integrated writing assignments, contextual vocabulary instruction, and student summarization of learning.

Conclusions

The purpose of this study was to determine teacher perceptions of the impact of reduced school budgets on teachers' abilities to meet the instructional needs of their students. Conclusions that could be drawn from this study indicate that classrooms have been significantly affected by reduced school budgets. Results of reduced school budgets included increased class sizes, increased workloads, fewer resources, fewer opportunities for collaboration, fewer opportunities for professional learning, less planning/preparation time, and increased frustrations over the need to use their own personal time and monies to support the instructional needs of their students. A comparison of open ended responses to survey item responses indicated a disconnect concerning the challenge of less instructional time. Survey responses indicated that the decrease in instructional time was one of the least affected challenges while 16% of the open-ended responses indicated that participants felt they were not able to meet the needs of their at-risk students.

Response trends indicated significant levels of stress and may also indicate a feeling of a lack of control over the circumstances participants find themselves in. It is noteworthy to recognize that in spite of the multiple challenges addressed within this study, survey participants were incorporating the majority of the best practices identified in the survey instrument at least sporadically as a means of meeting the needs of their students. Although only one participant stated their belief in "the need to come together for the good of their students," one could deduce that the majority of the teachers surveyed were doing exactly that – continuing to work to meet the needs of their students in spite of the economic environment.

Implications

There is currently no evidence that financial relief is on its way for public education yet children are still showing up to school each day expecting and deserving the best education that school systems have to offer. In order to meet these instructional needs, it is imperative that the factors affecting instruction be carefully studied. It is only logical that researchers focus their attention on teacher perceptions as the classroom environment is critical to student success. The findings in this study will help administrators, other teachers and legislators understand the significant impact that reduced school budgets have on instruction. This study has the potential to inform budgetary decision making by legislators and administrators. Administrators should also use the information contained within this study to create school cultures that support both personnel and instructional needs. Finally, teachers need to understand that they are not alone in their struggle to meet the instructional needs of their students during this economic downturn; this study can serve that purpose.

Recommendations

Recommendations for Practice

1. School systems will begin the preparation of an FY15 budget over the next few months. Study results could be used by school and system leaders to prioritize and possibly publicize budgetary non-negotiables. Based on survey responses, leaders should carefully examine staff to student ratios so that teachers can be effective in implementing small group and individualized instruction to meet student needs. Budget considerations should also include an end to furlough days and strategies to provide essential classroom resources.

2. As school systems begin planning their FY15 calendars consideration should be given not only to the number of instructional days but also to making sure that work days and professional learning days are built into the calendar and spread across the year. Building in this time throughout the year would provide teachers with additional time to manage the myriad of responsibilities associated with teaching.
3. Survey results indicate that teachers feel that they just cannot get everything done. System instructional leaders could use the results of this study to plan for embedded professional learning which would not only help teachers be more effective in the use of best practices but would also allow them to work collaboratively to plan for their implementation. Shared responsibility could allow for more effective implementation of the strategies while also providing relief from the feelings of isolation and not being able to get everything done. Consideration of effect size of instructional strategies would also help prioritize professional learning and expectations for the use of these high impact learning strategies.
4. Results of this study could inform school leaders as they plan the use of federal programs monies which are often computed separately from state and local funds. Understanding teacher perceptions could assist them in making choices concerning resources which teachers identify as needed; survey responses indicated technology and media center books as highest priorities. Survey results also suggest using these funds to hire support staff to support classroom instruction.

5. School, system, and community leaders could use the results of this study to recognize the level of stress that teachers are experiencing as they work to meet the needs of their students. Understanding this stress could assist them in planning meaningful ways to support, recognize and validate their teachers.

Recommendations for Further Research

1. Further studies should be conducted to expand this body of work into other grade levels and other school systems to gather teacher perceptions across grade levels and varying school system conditions.
2. Comparing school system survey results to other school systems could serve to identify similarities and differences; school systems could learn from one another to seek ways to support their teachers in meeting student instructional needs.
3. Further study to compare teacher perceptions to administrator perceptions regarding budgetary decision-making would provide a broader perspective of the economic conditions resulting in more informed decision making regarding financial, time, and personnel decisions.
4. To gauge the accuracy and effectiveness of the implementation of instructional best practices further study should be conducted to compare measured effectiveness of the use of best practices to teacher self assessment of best practices used in meeting instructional needs of their students.

Dissemination

The results of this study will be shared with the following groups:

1. Wayne County directors and administrators during administrative professional learning collaboratives to inform budgetary and personnel decision-making for FY2015.
2. Teacher leaders in Wayne County during professional learning collaborative for the purpose of working together to define practices that should continue, practices that need to be done away with, and practices that need to have adjustments made in order to be more effective.
3. Phi Delta Kappan – researcher will submit proposal for inclusion in publication.
4. PAGEONE – researcher will submit proposal for inclusion in publication.

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APPENDIX A
IRB CORRESPONDENCE

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From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IRB/STIRB)

Initial Approval Date: 9/17/13

Subject: Status of Application for Approval to Utilize Human Subjects in Research

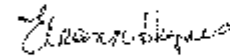
After a review of your proposed research project numbered 1114072 and titled "Teachers' Perceptions of the Impact of Reduced School Budgets on Teachers' Abilities to Meet Instructional Needs of Their Students," it appears that your research involves activities that do not require full approval by the Institutional Review Board (IRB) according to federal guidelines.

According to the Code of Federal Regulations Title 45 Part 46, your research proposal is determined to be exempt from full review under the following exemption category:

- B2 Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless (1) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (2) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research, as submitted, is exempt from IRB approval. No further action or IRB oversight is required, as long as the project remains the same. If you alter the project, it is your responsibility to notify the IRB and acquire a new determination of exemption. Because this project was determined to be exempt from further IRB oversight, this project does not require an expiration date.

Sincerely,


Eleanor Haynes
Compliance Officer

APPENDIX B

SURVEY – HOW DO TEACHERS MEET THE INSTRUCTIONAL NEEDS OF
THEIR STUDENTS DURING TIMES OF REDUCED BUDGETS?

How do teachers meet the instructional needs of their students during times of reduced budgets?

I) Demographics

- 1) Years experience as a teacher: _____
- 2) To what extent has your classroom been affected by reduced school budgets? None Slight Significant

II) Reductions in school budgets have affected my instruction in the following ways:

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
1) I had fewer instructional supplies.	SD	D	A	SA	NA
2) I had an increased class size.	SD	D	A	SA	NA
3) My daily work load has increased due to increased class size.	SD	D	A	SA	NA
4) My preparation time has increased due to increased class size.	SD	D	A	SA	NA
5) My paid planning time has decreased.	SD	D	A	SA	NA
6) My work load has increased due to increased duties/responsibilities.	SD	D	A	SA	NA
7) The amount of time devoted to instruction has decreased due to less student instructional days.	SD	D	A	SA	NA
8) Time for collaborative planning with other teachers has decreased.	SD	D	A	SA	NA
9) Opportunities for professional learning which help me to meet the needs of my students have decreased.	SD	D	A	SA	NA

III) As a result of reduced school budgets I have encountered the following challenges while trying to meet the instructional needs of my students:

1) I felt more stressed as a result about meeting the needs of at-risk students due to increased class sizes.	SD	D	A	SA	NA
2) I felt obligated to use more of my own personal time to plan for instruction.	SD	D	A	SA	NA

3) I felt pressured to use more of my personal money for instructional supplies.	SD	D	A	SA	NA
4) I felt obligated to use more of my own personal time for grading/assessing learning.	SD	D	A	SA	NA
5) I felt more isolated from other teachers than in previous years.	SD	D	A	SA	NA
6) I had less time to work with individual students and/or small groups than in previous years.	SD	D	A	SA	NA
7) I had more difficulty following mandated curriculum and pacing guides than in previous years.	SD	D	A	SA	NA
8) I have had more difficulty implementing high impact learning strategies than in previous years.	SD	D	A	SA	NA
9) I have not felt as comfortable implementing	SD	D	A	SA	NA

IV) I have been effective in using the following strategies to compensate for decreased instructional time:

0= Not at all
1=Rarely
2=Sporadically
3=Consistently

1) Activating prior learning	0	1	2	3
2) Building relationships with students	0	1	2	3
3) Classroom management strategies	0	1	2	3
4) Cooperative learning	0	1	2	3
5) Formative assessments	0	1	2	3
6) Higher order thinking activities	0	1	2	3
7) Nonlinguistic representations/concept mapping	0	1	2	3
8) Providing specific and targeted feedback	0	1	2	3
9) Setting student learning goals and expectations	0	1	2	3
10) Student summarization of learning	0	1	2	3
11) Contextual Vocabulary instruction	0	1	2	3
12) Integrated writing assignments	0	1	2	3

V) What experiences (positive or negative) related to the impact of reduced school budgets would you like to share?