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**AN EXAMINATION OF BUDGET REDUCTIONS IN HIGH-  
WEALTH PROPERTY SCHOOL DISTRICTS AND  
LOW-WEALTH PROPERTY SCHOOL  
DISTRICTS IN TEXAS**

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WEALTH PROPERTY SCHOOL DISTRICTS AND  
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DISTRICTS IN TEXAS**

**by**

**Dora E. Saucedo, B.S., M.Ed.**

**Treatise**

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## **Dedication**

To my husband, Frank Saucedo, words cannot express the love and gratitude I feel for you. You have always been my greatest supporter and best friend. I know that I would not be where I am today if it were not for you. I can only hope I have made you proud. I look forward to spending the rest of my life with you. I love you!

To my kids Christina, Christopher, and Marcus, thank you for letting me pursue my dreams. I love you more than words can say. Let it serve to remind you that there is no challenge you cannot overcome and no goal too big to reach. Dream big and you'll go far!

To my parents, Dorina and Armando, I know you both are very proud of me. You both have taught me that hard work and dedication pay off. Thank you for instilling those qualities in me.

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Thank you all for helping me reach this very important accomplishment.

**An Examination of Budget Reductions in High-Wealth  
Property School Districts and Low-Wealth  
Property School District in Texas**

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The University of Texas at Austin, 2012

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In June of 2011, The 82<sup>nd</sup> Legislature approved a reduction to Texas public education funding in upwards of \$4 billion. Districts, regardless of wealth, responded by making budgetary reductions that affected personnel, programs, and services. The reduction in funding is expected to continue into the next biennium. This study examined the prioritization of budget reductions and process utilized by high-wealth and low-wealth property school districts to enact budget reductions to the various operating expenditures and the inequities that surfaced as a result of the reductions.

The research questions included in the study were:

1. What budget-reduction options are prioritized at the district level for high-wealth property school districts versus low-wealth property school districts?
2. What budget-reduction process was utilized at the district level by high-wealth property school districts and low-wealth property school districts?

3. What district-level budget functions were slated for reduction at high-wealth property and low-wealth property school districts and what are the equity implications that surfaced as a result of the reductions?

The study utilized a mixed-methods design. A 5-point Likert scale survey and semi-structured interview were used to examine the budget-reduction prioritization and process. An independent samples *t*-test was utilized to examine 2010-2011 and 2011-2012 per-pupil expenditures by function (N=60). The sample included 30 high-wealth and 30-low-wealth school districts.

The results of the qualitative data indicated that districts prioritize communication with stakeholders and school boards when deciding on budgetary reductions.

Communication of the budget problem to all stakeholders was a high priority so as to ensure buy-in once decisions on budget reductions were made. The semi-structured interview revealed emergent themes that included maintaining the vision, transparency, stakeholder participation, equity, and impact of budget reductions. The *t*-test revealed statistical significance in the areas of instruction, security services, and payroll. The results also revealed that programs and services aimed at assisting the students with most need were either decreased or eliminated.

Findings derived from this study will provide educational practitioners and policymakers with a conglomerate of information on how school-district leaders are examining their financial resources, areas designated for reduction, and areas they perceive as vital for preservation.



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## **Chapter 1: Introduction**

The economic downturn and losses in tax revenue led to a widespread budgetary shortfall that caused billions in reduction to public school funding. On June 28, 2011, Senate Bill 1 (SB 1) was passed by the legislature with a vote of 21-9 that called for \$4 billion in cuts to public education. This is the largest reported budget cut to public education in the history of the State of Texas, which includes less state funding per students through the biennium (Texas Association of School Administrators [TASA,] 2011).

The shortfall severely impacted public school district funding. The magnitude of this impact was felt in educational programs and services across the educational continuum, Pre-K-12, especially in programs that have been recognized for assisting students with special needs. The most recent reported impact affected at-risk educational programs in South Texas. The budget cuts impacted funding for discretionary programs for English-language learners, after-school tutoring, and at-risk programs. These programs have assisted these South Texas school districts in making headway by attempting to close the achievement gap and increasing the academic progress of minority children (Taylor, 2011).

The budget reductions forced many school districts to eliminate or reduce many high-priority programs, one being Pre-K programs. Pre-K programs serve to educate eligible three and four year old students who qualify for being either low-socio-economic or Limited English Proficient (LEP). The slashing in funding for a full-day program left districts with either eliminating the Pre-K program or reducing it to a half-day. The reduction meant many children did not receive this valuable early start in their public

school preparation. Furthermore, early-warning systems that assist school districts in increasing graduation rates and merit pay for teachers were also targeted for reduction. It is projected that public school funding will be face further cuts through the biennium (Cavanagh, 2011).

Texas operates under a biennial budgetary process, and its state constitution calls for a balanced budget. As a result, the shortfall made it difficult for legislators to balance the budget without touching educational funding (Castro, 2011). The shortfall included providing less than what is required by the state's school funding formula. The House plan called for a reduction in the amount of money provided to public schools from \$37 billion to \$32 billion while the Senate plan called for a larger reduction (Cavanagh, 2011).

This \$4 billion reduction in state aid has already impacted public school districts in a variety of ways. School districts have responded by implementing hiring freezes, increasing class sizes, increasing teacher workload, and modifying school start times. Lynn Moak, of the financial consulting firm of Moak, Casey and Associates, has analyzed state education for years. He indicated that the scale of the proposed cuts by the legislature meant that Texas school districts would be forced to cut between 80,000 to 100,000 jobs. Texas public school districts, personnel salary costs comprise more than 80 percent of the total annual budget (Castro, 2011).

In order to fund personnel, programs, and services, many school districts in Texas depend on state revenue, local property taxes, and federal dollars. A variety of these programs compete for their share of these dollars. Programs such as English-as-a-Second Language, Special Education, and Free and Reduced Lunch Programs are all funded

through their share of categorical funding. Additionally, as the cost of health insurance and fringe benefits has also skyrocketed, school districts have become highly dependent on state aid (McNeil, 2009). In 2009, the state paid 42.9% of the total funding for public education (Texas Education Agency [TEA,] 2010). This is due to the passage of the Property Tax Relief Plan, which shifted the burden from taxpayers to the state (Alexander, 2010). The federal dollars that have been recently given to public schools through the American Recovery and Reinvestment Act (ARRA) also made public school heavily reliant on monies other than just local funding (Cavanaugh, 2011).

The Texas Education Code (1995) states,

It is the policy of this state that the provision of public education is a state responsibility and that a thorough and efficient system be provided and substantially financed through state revenue sources so that each student enrolled in the public school system shall have access to programs and services that are appropriate to the student's educational needs. (TEC 42.001)

The code also calls for a public school finance system that adheres to a standards of neutrality and provides substantially equal access to similar revenue per student at a similar tax effort, considering all state and local tax revenue (TEC 42.001b). The Foundation School Program (FSP, 2010) is the state program that establishes the amount of state and local school funding due to school districts under the Texas school funding law. The operations funding component of the FSP includes revenue to school districts to compensate for the mandatory reduction in their local maintenance and operations tax rate (TEA, 2011)

The Property Tax Relief Plan was passed in 2006 and modified in 2009. The Texas school districts' maintenance and operation (M&O) tax rates were reduced (compressed) by one-third over a two-year period (Garcia, 2011). The plan guarantees a



set amount of funds per student in weighted average daily attendance in order to compensate for a mandatory reduction in the M&O tax rate. The percentage of a school district's adopted maintenance and operation tax rate for the 2005 tax year serves as the basis for state funding. If the state compression percentage is not established by appropriation for a school year, the commissioner shall determine the state compression percentage for each school year based on the percentage by which a district is able to reduce the districts M&O tax rate for that year (TEC Sec 42.2516).

School districts can assess tax effort beyond the CTR and the first six cents of tax effort are called the "Golden" pennies. These pennies are called golden because they are able to generate the highest level of supplemental funding. Additionally, a school district can choose to go beyond the CTR and six pennies, and these are called the "Copper pennies"; however, these pennies generate a lower level of funding (TEA, 2011). The maximum M&O tax rate a school district can set is \$1.17 (Garcia, 2011).

Texas law requires school districts to calculate two tax rates: the effective tax rate and the rollback tax rate, after the district receives its certified property value estimates and appraisal rolls from a certified appraiser. Generally, if a school board adopts a tax rate above its rollback tax rate, it must hold a tax ratification election (TRE) to ratify the rate. However, a district that has reduced its M&O tax rate one year may be able to raise its M&O tax rate without holding an election (Texas Association of School Boards [TASB], 2011). Raising taxes is highly political and school leaders will usually implement budget reductions rather than face a ratification election.

The ever-rising cost of programs and services makes it imperative for school leaders to understand how to effectively manage budget reductions. School leaders

should arm themselves with the rights facts and carefully analyze sources of data so as to make decisions that will meet the best interest of the school district, its students, and the community it serves (Butler, 2011).

The importance of comprehending how money is spent and what reductions need to be made are attributed to the rising cost of funding public education. Since 1967, the cost of education has risen by 61% (Bracey, 1996). Hanushek and Rivkin (1997) traced the underlying factors behind the rising cost of public school spending in the United States between 1890 and 1990. For the 100-year period, Hanushek and Rivkin (1997) found that real public expenditure on primary and secondary education rose from \$2 billion in 1890 to \$187 billion in 1990. In Texas, public schools spent \$54.4 billion in 2008-2009 to educate 4.6 million children (Moak & Casey, 2009).

The rising costs of educational programs and services can be attributed to the rise in fuel costs, food prices, salaries, benefits, and energy costs, which are all trending upward at a record pace. Rising energy costs alone impact almost every school district in the country according to a poll by the American Association of School Administrators (AASA). Approximately 99% of the superintendents surveyed indicated that they and their board felt compelled to act, from implementing energy conservation measures to utilizing a four-day work-week in the summer to cut energy costs (Lafee, 2009). This is not only occurring in Texas, but states such as California are also feeling the pinch. In California, rising gasoline and diesel costs have put a serious dent in the transportation budgets. A year's worth of bus services costs an average of almost \$1,400 per student in urban districts and more than \$900 in rural areas. The state picks up less than half of the transportation tab each year (Lafee, 2009).

Transportation costs are getting costlier every year; however, in the public's mind, the main factor for rising school costs is being blamed on teacher salaries, especially the fringe benefits. Teacher salaries and benefits are issues of grave concern among school districts. Benefits such as health care insurance and retirement funding doubled as a proportion of total teacher compensation between 1967 and 1991 (Hanushek & Rivkin, 1997). A portion of this rising cost stems from benefits extended to non-instructional personnel and school-level support staff. Funding for personnel is one of the biggest challenges to balancing the school-district budget (Cavanagh, 2011). The rising costs of these salaries and benefits for public educators highlight the need to examine the most effective cost-cutting methods utilized by school-district leaders as they make decisions on expenditures for the approximate 15% to 20% appropriated to fund programs and services.

Oftentimes, school-district leaders' primary goal when implementing budget reductions is to streamline operations and services of the district, while continuing to improve academic services for all students. Some of the cost-saving measures are aimed at re-working teacher assignments, modifying class schedules, and outsourcing services like transportation and food costs (Cavanagh, 2011). As districts move to adopt the district budget for the school year 2012-2013, district superintendents and school board members will be looking at a budget that continues to be much slimmer than the previous year's budget. The money that will be allocated to the schools will have superintendents, chief financial officers, and school principals finding creative ways to fund yearly expenditures. The methods that school districts will utilize to make budget cuts at the district level must effectively provide funding for programs that ensure academic

achievement and assist in meeting the state accountability standards and those mandated through the No Child Left Behind Act (NCLB) (McNeil, 2009).

The higher accountability standards coupled with the \$4 billion reduction in state aid and additional cuts in discretionary grants in excess of \$1 billion have prompted five school finance lawsuits. School districts across Texas are readying for litigation they say is necessary to overhaul the current Texas school finance system. The plaintiffs include the high-wealth districts to the lowest-wealth school districts in Texas. For fiscal year 2011-2012, Senate Bill 1 (SB1) made across-the-board percentage reductions to districts' regular program funding. Each of the lawsuits, while making somewhat different claims, center on words included in the Texas Constitution that require the Legislature to provide an "efficient system of public schools" (Section 1). One of the lawsuits filed by the Texas Taxpayer & Student Fairness Coalition on behalf of low-wealth school districts, such as Pflugerville ISD and San Antonio ISD, argue that low wealth districts, that are willing to tax themselves at the highest rate allowed, are unable to access the same dollars for education as high-wealth school-districts that tax themselves at lower rates (*The Texas Taxpayer & Student Fairness Coalition v. Robert Scott*, 2012).

This argument is echoed by a similar lawsuit filed by The Mexican American Legal Defense and Education Fund on behalf of a South Texas group of low-wealth school districts. One of the school-districts included in the lawsuit, McAllen ISD, currently taxes at \$1.04 for maintenance and operations and yielded only \$5,088 in the 2011 school year versus a high-wealth school-district, Point Isabel ISD, that taxes themselves at \$.95 for M&O and yielded \$5,915 per WADA. The MALDEF lawsuit also

argued that the school finance system is arbitrary and provides inadequate funding for low income and English Language Learners (*Edgewood ISD v. Robert Scott*, 2011).

The lawsuit filed by Thompson & Horton, LLP, representing districts such as Fort Bend, Houston, and Dallas, argues that the current school finance system is inefficient. They make the argument that the 82<sup>nd</sup> Legislature's decision to cut billions in public education for the 2012-2013 biennium, impacted the school-districts' ability to provide an adequate education. The lawsuit contends that each Texas student is now valued at an average of over \$500 less per year than in the 2010-2011 school year (*Fort Bend ISD, et al., v. Robert Scott*, 2011). The Haynes & Boone, LLP lawsuit filed on behalf of districts such as Frisco, Richardson, and Lewisville, indicate in their lawsuit that the State's severe reductions in funding have occurred at the same time as the higher accountability standards. They argued that this represents a violation of the State's constitutional responsibility to provide adequate resources for a quality public education (*Calhoun ISD v. Robert Scott*, 2011). The lawsuits will be combined for a trial that will occur in October of 2012 in Travis County (Equity Center, 2012).

### **Statement of the Problem**

The rise of goods and services, governmental constraints, budget barriers, coupled with a reduction in state aid has created a fiscal crisis for public schools. Timar and Roza (2010) suggested the need to explore the current governmental and local barriers that constrain budget decisions. Jarman and Boyland (2011) indicated a need to investigate school districts that have effectively maintained or increased student achievement while implementing extreme budget reductions. Peternick and Sherman (1998) discussed the need to study how school districts measure the effectiveness of resource allocation and

the methods by which cuts are made. Jones and Slate (2010) discussed the implications of lowering the 65% instructional expenditure in Texas public school districts and the impact on student achievement. The researchers discussed the need to study this further by utilizing other budgetary reduction variables and examining the methods by which district leaders prioritize budget reductions, while ensuring equity for all programs and services and distribution of campus budgets, when recession is of primary concern. Thus, the purpose of this research was to examine how school districts prioritize budget-reduction options, the process, and the examination of reductions to the district-level expenditures for both high-wealth and low-wealth property school districts. The study also examined the inequities that surfaced as a result of the budget shortfall.

The budget development process is critical during a time of diminishing resources. Many times, school district leaders make budgetary reduction decisions in an arbitrary or unimaginative fashion (Doherty & Fenwick, 1982). The stipulations placed upon the funding sources create barriers for the school districts as well as the requirement of public funding to spend their entire funding allocation each fiscal year. This creates a cost structure that is very difficult to adjust down when revenue drops (Fullerton, 2004). School districts deal with these revenue drops by implementing an across-the-board reduction on all budget functions, based on a certain percentage and often dictated by the finance department or superintendent (Slosson, 2000).

This type of budget-reduction process highlights the problem or the lack of attention placed on the nuts and bolts of financial management in K-12 public education. This can result in oversights and inadequate management-information systems that can delay appropriate responses to emerging financial crisis (Fullerton, 2004). Additionally,

implementing across the board reductions at the district or campus level does not assist the district in carrying out programs and services in an effective manner. Budget reductions must reflect a thorough analysis of the goals: academic program and budget priorities at the district level in order to ensure that campus and student needs are protected (Reddick, 2003). The budget cuts are unavoidable, and it is predicted that Texas school districts will face another round of cuts in the very near future. The Texas public school finance system is primed for an examination of effective budget-reduction methods.

This study will serve to make contributions to the practice of budgetary decision-making by examining prioritization of budget-reduction options and the process utilized at the district level at high-wealth property districts and low-wealth property districts, when faced with considerable budget reductions. Additionally, the study examined the allotment by per-pupil expenditures for various budget functions in a district-level budget for the 2011-2012 school year. Lastly, the study examined inequities that surfaced as a result of the budget cuts. Considering the emphasis on improving academic achievement in public K-12 schools and the increase in accountability, it is crucial to understand which resources district leaders considered vital to preserve and those that were eliminated. Furthermore, the study contributes to expand knowledge on rationales behind school-district decisions when faced with a financially constrained budget.

### **Purpose of the Study**

The purpose of this study was to examine the budget-reduction process utilized by high-wealth property school districts and low-wealth property school districts in Texas. The study consisted of examining the prioritization of budget-reduction options at the

district level as well as the budget-reduction process utilized by both high-wealth and low-wealth property school districts. Additionally, the study examined which district-level budget functions were slated for reduction, increased, or maintained for the 2011-2012 district-level budget and the equity implications that surfaced as a result of the shortfall.

### **Research Questions**

This study attempted to answer the following questions:

1. What budget-reduction options are prioritized at the district level for high-wealth property school districts versus low-wealth property school districts?
2. What budget-reduction process was utilized at the district level by high-wealth property school districts and low-wealth property school districts?
3. What district-level budget functions were slated for reduction at high-wealth property and low-wealth property school districts and what are the equity implications that surfaced as a result of the reductions?

### **Methodology**

Utilizing qualitative and quantitative methods, the researcher conducted a mixed-method research design study that provided data on the budget process utilized by high-wealth property and low-wealth property school districts in Texas to implement budget reductions. Additionally, the study examined budgetary reductions at the district-level, utilizing the various budget functions as variables from the school year 2010-2011 to 2011-2012 and examined the equity implications that surfaced because of the shortfall.

A survey was conducted at the district level that extended to the superintendent, chief-financial officer, and a school board member of high-wealth property and low-



wealth property school districts. The data for the survey were analyzed utilizing the SPSS software. Results of the survey assisted the researcher in determining the priorities that were given by the respondents to the budget-reduction process. Once, the survey was conducted, the researcher then conducted a semi-structured interview to add the respondents' "voice" to the budget-reduction process. The interviews also took place with the same survey respondents and with the selected high-wealth property and low-wealth property school districts.

To address the quantitative part of the study, the researcher examined 60 randomly selected district 2010-2011 and 2011-2012 district-level budgets. The researcher examined the budget functions that were slated for reduction at the district level as a result of the shortfall as well as the per-pupil expenditures for payroll for both high-wealth and low-wealth property school districts. The researcher obtained financial reports for the sample districts by accessing the Texas Education Agency PEIMS Financial Report system. The researcher utilized SPSS software to analyze the operating expenditures and mean changes in per-pupil expenditures by budget function for the two school year district-level budgets through the utilization of an Independent Samples *t*-test.

### **Definition of Key Terms**

*Biennium:* Biennium refers to a specified period of two years. The State of Texas operates under a two-year budget process.

*Budget Process:* The process by which government and organizations create and approve the budget is known as budget process.

*High-Wealth Property School Districts:* A school district with property wealth that is greater than \$476,500 per student Weighted Average Daily Attendance (WADA)

is considered to be a property wealthy school district. These school districts are subject to the recapture provisions in the Texas school finance system. This type of school district is defined in Chapter 41 of the Texas Education Code because specific finance-related rules that apply to them are contained in that section of the Texas Education Code (TEA, 2010).

*Low-Wealth Property School Districts:* A district with a property wealth sufficiently below the equalized wealth level to receive Foundation School Program (FSP) aid in excess of its Available School Fund (ASF) per capita allotment. Ch. 42 districts (and “Gap” districts) do not pay recapture.

*No Child Left Behind Act:* The No Child Left Behind Act of 2001 (NCLB) is a United States Act of Congress concerning the education of children in public schools that was originally proposed by the administration of George W. Bush and co-authored by Senator Ted Kennedy. The bill received overwhelming bipartisan support in Congress. NCLB supports standards-based education reform that is based on the belief that setting high standards and establishing measurable goals can improve individual outcomes in education. It requires the states to develop assessment in basic skills to be given to all students in certain grades, if those states are to receive federal funding for schools.

*Property Tax Relief Plan:* Governor Perry signed into law a package of bills that has provided tax relief for Texas homeowners and compressed the Maintenance & Operation by one-third.

*Superintendent:* A superintendent is the district leader-school superintendent who is seen as the Chief Executive Officer of the school district.

### **Significance of the Study**

The study was both timely and relevant particularly because of the budgetary shortfall in Texas, which has caused a reduction in funding for Texas public school districts. The intent of this study was to assist in closing the current gap in knowledge regarding budget-reduction methods utilized by high-wealth districts and low-wealth districts at the district level. Furthermore, this study examined budget-reduction prioritization, the budget-reduction process, and the implications to programs and services and inequities resulting from these budgets cuts in high-wealth property and low-wealth property districts in Texas. The findings derived from this study will provide educational practitioners and policymakers with a conglomerate of information on how school-district leaders are examining their financial resources, areas designated for reduction, and areas they perceive as vital for preservation.

### **Limitations**

Limitations included the overall structure of the district and the desired goals for each organization when undergoing the budgetary reduction process. Survey instrument design and respondent bias were also taken into account as a methodological shortcoming when examining the results. Variability existed between the school districts included in the quantitative section of the study. School districts have flexibility in how they chose to define a budget function in the district budget. Lastly, since the sample contained only public school districts in Texas, conclusions were not generalized beyond Texas.

### **Delimitations**

The study focused only on the budget-reduction methods utilized by high-wealth property and low-wealth property public school districts in Texas. To assist in examining

the prioritization and budget-reduction process, the study was limited to one high-wealth property school district and one low-wealth property school district in Texas. To examine the budget reductions and equity implications, the study was expanded to a random sample of 60 school districts: 30 high-wealth property and 30 low-wealth property districts in Texas. The survey respondents were limited to school-district superintendents, chief financial officers, and school board members. The study was also limited to budget-cutting methods utilized for district-level budgets.

### **Assumptions**

This mixed-methods study sought to examine the budget-reduction process utilized by high-wealth property and low-wealth property school districts at the district level. It was assumed that the respondents answered the survey truthfully and without bias and that superintendents, chief financial officers, and school board members were involved in the budget decision-making process. Furthermore, it was assumed that the school districts had a process for implementing budget reductions.

### **Summary**

This chapter began by explaining the budget shortfall that caused a reduction in funding for public education in Texas. The study examined how the reductions affected public school budget decisions. The drop in state revenue placed a large burden on school districts to find the most effective methods to make budgetary reductions without significantly affecting the academic program. The study sought to examine the method by which budget cuts were made at the district level for high-wealth property and low-wealth property school districts, as well as it examined budget functions designated for

reduction at the district level for the 2011-2012 school year and the equity implications that surfaced as a result of the reduction in per-pupil expenditures.

## **Chapter 2: Literature Review**

Chapter 2 presents an extensive review of literature that includes an overview of public school finance, the budgeting process, and relevant research. Furthermore, this review of literature will discuss the equity implications as a result of allocating resources during financial constraint. Additionally, the various types of budgeting methods, cost-cutting methods, and the conceptual framework utilized in this study will also be discussed.

### **An Overview of Public School Finance**

Public financing of schools has been a feature of education in the United States since the turn of the last century. School finance reform has been produced through a series of challenging court cases that came in a series of waves (Reyes & Rodriguez, 2004).

#### **First Wave: Brown v. Topeka Board of Education**

The impetus for the first wave was the *Brown v. Topeka Board of Education* (1954), which abolished separate but equal schools and set the stage for seeking equal treatment for students (Reyes & Rodriguez, 2004). Supported by the *Brown* decision and subsequent federal initiatives, school finance reform began in the late 1960's and early 1970's. Most of the reform came from court cases that addressed finance systems that relied mostly on local property taxes and produced wide disparities in both available revenue and associated educational expenditures (Odden, 2000).

The earliest cases in California (*Serrano I v. Priest*, 1971) and Texas (*San Antonio ISD v. Rodriguez*, 1973) brought to light the existence of extreme disparities in funding among districts. The lowest property wealth districts were taxing themselves at

extremely high rates to generate revenue for schools. This paled in comparison to the revenues of much wealthier districts that were able to generate it with relatively minimal tax effort. In the *Serrano* case, the California Supreme Court decided that education is a fundamental right; inequities in educational opportunities are a matter for the judiciary to consider, and that both the U.S. Constitution's equal protection clause and California's equal protection clause mandate judicial intervention (Odden & Picus, 2004).

In the *Rodriguez* case, the U.S. Supreme Court ruled that education was not a fundamental right and upheld the system's constitutionality, despite acknowledging the disparities that existed among school districts. The Supreme Court further concluded, "Whereas the key to education as a fundamental right could not be located in the U.S. Constitution, it might be found in the education clauses within the state constitution" (Alexander & Alexander, 1992, p. 775). The states' supreme courts expressed sympathy toward poor school districts; however, 15 states declared their states' education finance system to be constitutional (Rebell, 1998). For the states whose courts ruled in their favor, state legislatures either resisted the judicial mandate (as in New Jersey) or ignored it all together (as in West Virginia) (Rebell, 1998). This decision was a setback for both the Texas plaintiffs and for the school finance litigation reform movement (Imazeki & Reschovsky, 2003).

### **Second Wave: The Equal Protection Clause**

The second wave of school finance litigation began with the *Rodriguez* decision and proved to be quite lengthy. The key issue in this second wave concerned the equal protection amplification of education clauses in the constitutions of several states, each of which describes the nature of public schooling and the responsibilities of the states. The

specific languages of the state constitution education clauses vary substantially from state-to-state. Some require legislatures to establish a “uniform system of public schools,” and others mandate state lawmakers to provide a “thorough and efficient,” “ample” or “adequate” education (Rebell, 1998, p. 26). The strategy shifted to using the state’s education clauses as the basis for seeking remedy from the extreme disparities in quality of education among school districts (Odden & Picus, 2004; Rebell, 1998; Reyes & Rodriguez, 2004).

Legal scholars contributed greatly throughout this wave by developing an understanding of how the reliance on local property taxes for school funding directly relates to existing disparities in educational expenditures and most importantly, on the quality of education associated with varying expenditures (Reyes & Rodriguez, 2004). The utilization of the state’s education clauses allowed states such as New Jersey (1973), Connecticut (1977), West Virginia (1979), and Arkansas (1983), to prevail in the courts. The courts issued a decision that education was a fundamental right under the constitution of the state. However, in the majority of cases heard between 1973 and 1988, state supreme courts issued an opinion that public education was not a fundamental right for purposes of triggering equal protection mechanisms and for purposes of establishing equity in the funding of education (Rebell, 1998).

The resistance to change caused many of these battles to go on for many years. The *Brown* decision took a full decade before desegregation was actually implemented (Reyes & Rodriguez, 2004). An analysis of school finance by Gittell (1998) discussed school finance reform in several states. The author indicated that there is a lack of attention to state politics surrounding the implementation of reform and that the lack of



attention is a contributing factor to the length of time it takes to see the positive impact of court victories. The continuing resistance to enacting change can further translate into states not having enough resources to serve the increasing percentage of low-income students and diverse racial groups (Odden, 2000).

### **Third Wave: Achieving Adequacy**

The lack of academic progress by low-income and minorities was the key concern for the third wave of school finance litigation. In *Rose v. Council for Better Education*, Kentucky's Supreme Court went beyond the plaintiff's request seeking more equitable funding formulas by striking down the entire state system of Kentucky's constitution. The *Rose* court found that Kentucky's overall educational effort was inadequate and failed to provide an efficient system of schools. The Kentucky judges discussed the intention of the framers of Kentucky's state constitution and concluded that education was meant to be a fundamental right of vital interest to the state (Rebell, 1998).

The arguing for fiscal neutrality in the courts on behalf of low-wealth property districts by school finance reform advocates gave light to the issue of adequacy in public education. Adequacy refers to how educational inputs along the focus of school finance litigation can be tied directly to specific academic outcomes (Reyes & Rodriguez, 2004). The Kentucky case allowed for a definition of adequate education as one that provided (a) oral and written communication skills, (b) knowledge and social economic and political systems, (c) knowledge of governmental processes, (d) knowledge of mental and physical wellness, (e) grounding in the arts, (f) adequate training for life work, and (g) sufficient academic and vocational training to compete with students in surrounding states (Verstegen, 1998).

An interesting finding by Verstegen (1998) in an analysis of recent policy and legal treatment indicated that school districts can identify the resources needed to support adequate academic achievement and allocate them accordingly. However, if adequacy is a standard reflective of the state's conceptualization of the basic minimum education, then the resources associated with the basic minimum will likely become the ceiling for public educational spending. The author discussed the challenges that exist when determining the level of funding that would be necessary to fully support a high minimum standard of adequacy in public education. An adequacy standard seeks to answer the questions, how much money is enough? and how much education is enough? The answers to these questions are not only required from policy experts, school finance experts, or reform advocates; it requires the involvement of educators who understand the day-to-day operations of schools and the instructional requisites needed to accomplish a high minimum standard of adequacy for all students in public schools.

The three waves of public school finance (litigation, legislation, and policy recommendations) have focused squarely on the equity and adequacy debate. The decisions from the court cases changed many of the states' public education finance formulas. The per-pupil-expenditure began to rise in the 1980's and taxpayers were footing most of the bill. It was in the late 1980's that public demands for greater public school accountability began to surface. The demand for accountability caused many states to establish academic accountability mechanisms.

In 2002, President George Bush signed into law the No Child Left Behind Act (NCLB) that required all states to implement annual academic assessment measures as part of a broader accountability system that included school report cards and state

minimum performance standards. The NCLB Act was a precursor for many states to implement more aggressive standards of accountability. By 2004, the majority of states required the passing of exit exams prior to graduation (Reyes & Rodriguez, 2004).

Higher accountability and demands for adequacy meant public school districts needed to allocate their resources to ensure equity, while meeting the rigorous accountability standards set forth by the state. Educators needed to examine their current use of resources in order to ensure maximum productivity for their educational dollar (Odden & Picus, 2004). Public schools' capacity to devise innovative ways to fund each program was often problematic. Considering the NCLB's requirement that all students be proficient in English Language Arts/Reading and Math by 2014, more attention to detail must be paid to the budget and resource allocation process (Odden, 2000).

### **Resource Allocation and Equity**

Miles and Roza (2006) researched the topic of allocation of resources by providing an in-depth explanation of student-weighted allocation. The study examined the method by which student-weighted allocation affected the pattern of resource distribution within urban districts as well as staffing patterns. Most districts allocated resources by assigning school staff using enrollment figures, adding staff positions and resources on top of this formula, and converting staff positions to dollars using district-wide average salaries. Staff formulas were a very common method for assigning full-time positions to a school. These full-time positions were commonly labeled as full-time equivalent or FTE staff positions.

This process of allocation made it difficult to analyze school budgets and could cause disparities, which were often overlooked at the central administrative level. The

concept of student-weighted allocation was to incorporate all baseline education and additional student resource needs into a formula that drove the distribution of dollars, not staff. Common categories for weighting included special education, grade-level, poverty, limited English-proficiency, vocational education, and gifted education. An additional funding weight would be added to the base formula for each category, ensuring a more efficient allocation of resources (Miles & Roza, 2006).

The study provided evidence that student-weighted allocation can be a means toward greater resource equity among schools within districts. The study also highlighted the need for a better understanding of how districts distribute resources among schools. However, the findings also indicated that moving toward a student-weighted allocation funding would not guarantee equity and that school districts must keep in mind the total funds included in school budgets, key elements of the allocation formula, and prior district spending patterns (Miles & Roza, 2006).

A similar study on the allocation of resources was aimed at understanding the association between financial resources, student demographics, school capacity, and student achievement in Latino/majority elementary schools. The examination of these key inputs was conducted in three large urban school districts in Texas: Austin, Houston, and Dallas. This study evaluated a variety of variables such as test scores, teacher certification and degree obtainment, funding expenditures and their impact on student achievement as measured by math and reading scores on the Texas Assessment of Knowledge and Skills (TAKS). The researchers used urban schools in Austin, Houston, and Dallas because of the large percentage of Latino/a and African American students they educated. The sample size included 419 elementary schools (Vasquez-Heilig,

Williams, & Jez, 2010). The researchers utilized the Public Education Information Management System (PEIMS) database financial variables and adjusted them to arrive at a per-pupil expenditure percentage. Utilizing a generalized least square (GLS) regression model, the study examined input changes associated with TAKS math and reading score growth. The researchers also utilized GLS regression models to consider the statistical relationship between year-to-year changes in school expenditures and school test scores, controlling for changes in school's teaching capacity and changes in schools' student demographics. The findings indicated that increasing expenditures significantly impacted academic achievement as measured by math and reading TAKS test scores. Furthermore, the findings also found that increasing instructional expenditures was also related to increases in math TAKS scores. The study discussed the ramifications of policy strategies included in Texas House Bill 3 in 2009 that focused mainly on increasing instructional expenditures and highlighted the need to not only study what money was spent but how the money was spent (Vasquez-Heilig et al., 2010).

The importance of allocating more money to the instructional program in order to increase academic achievement was also the subject of a study conducted on the Texas 65% instructional allocation rule. The objectives behind the 65% allocation for instruction call for (a) an increase in the amount of money spent in the classroom without increasing taxes; (b) a reduction in the amount of money spent on non-classroom expenditures, such as transportation, teacher training, curriculum, and food services; and (c) provisions for a first-class education that is indicative of higher student performance (Jones & Slate, 2010).

The researchers reviewed the 2007-2008 Academic Excellence Indicator System (AEIS) data for all districts in Texas and the methodology included an analysis of performance by ethnic subgroups. The findings demonstrated a clear relationship between instructional expenditure ratio and sub-population student performance. However, a study by Bingham, Jones, and Jackson (2007) indicated the opposite. This study examined data from nine states utilizing the 65% ratio, one state being Texas. The findings of the study indicated that there was no minimum instructional spending allocation that necessarily produced higher student achievement. It is important to point out that differences existed in the study conducted by Jones and Slate (2010) in terms of variables. The Jones and Slate (2010) study analyzed subgroups and the study conducted by Bingham et al. (2007) analyzed the total student population.

The study by Miles and Roza (2006) examined the need to utilize varying weights with special programs such as special education. Other studies have gone beyond the focus of the weighted adjustment for special programs to the concept of better infrastructure that ensures adequacy and equity (Crampton, 2009; Plummer, 2006). Crampton (2009) sought to conclude that spending money on improving school infrastructure would impact student achievement. Data for the study were drawn from national databases maintained by the Institute for Education Sciences and the US Census Bureau, Public Elementary Secondary Education Finance Database. The study utilized descriptive statistics and multivariate analysis to test the data. The results indicated that spending on school infrastructure does matter when it comes to student achievement. However, the impact of these investments was maximized when they were done in tandem (Crampton, 2009). The importance of ensuring that school districts not only kept

up with increasing enrollment by building more schools, but also ensured that older buildings were maintained were highlighted in this study as an investment in human capital. School districts in Texas have taken advantage of the instructional facilities allotment (IFA) that provides school districts with the lowest property wealth funding for new building construction, renovations, and expansions. However, the current reduction in state aid has left school districts with little or no start-up funds to furnish and equip them (Cavanagh, 2011).

The above studies highlighted the necessity for adequate allocation of resources to ensure academic achievement for diverse populations. However, they also highlighted the fact that increasing the allocation of monetary resources to fund education will not always ensure higher quality; more focus should be placed on how the money is spent. Additionally, the studies provided support to the issue of school leaders utilizing an effective process to make budgetary reductions that do not include across-the-board cuts. Fullerton (2004) indicated a more effective method was thoroughly examining the proposed budget to determine which effective academic programs should not be eliminated.

Ensuring that effective programs are not eliminated and allocating resources is a very important task that sometimes becomes an overwhelming for school-district leaders. Whatever their vision is of the school-district budget, the process of budgeting can be defined in various ways and executed through a variety of methods. However, it is important for school-district leaders to ensure that equitable distribution of monies to fund programs and services is prioritized when undergoing the budget adoption and

reduction process. The understanding of the budget process comes with first understanding how budgeting is defined.

### **Budgeting Defined**

The word budget has a variety of meanings. According to Simmons (2005), “to provide a specific and comprehensive definition of the term budgeting is difficult because it suggests a variety of interrelated concepts in the resource allocation process” (p. 22). In the literature, several definitions are given that are provided based on the perspective of the individual. Kramer (1979) describes budgeting as a multipurpose document providing an estimate of future costs and outlining a systematic plan for utilization of manpower. A more general definition comes from Wildavsky and Caiden (1997) who described budgeting as a process that is focused on translating financial resources into human purposes and is a series of goals with a price tag attached to each one.

Slosson (2000) defined budgeting much like Wildavsky and Caiden (1997): a series of goals. However, Slosson (2000) extended it by stating that the goals should be ranked according to the largest needs of the organization. Brimley and Garfield (2008) described budgeting in a more comprehensive form and defined it as “a process of calculating the costs of operating an educational program and then applying the legal provisions of local, state, and federal government laws and restrictions to determine the sources of revenue and amounts obtainable to meet the anticipated expenditures” (p. 283). The budget development process should be attached to goals and ranked in order of priority. Several studies have attempted to determine the most effective budget development process for developing the budget.



### **Relevant Research on the Budget Development Process**

Bird, Wang, and Murray (2009) conducted a study on superintendents' budget-building strategies. The study surveyed 115 school-district superintendents of various levels of experience in a southeastern state with respect to their budget-building strategies. The quantitative study included a Likert-scale survey that was meant to address the variables of openness in the budget-building process, level of superintendent expertise and preparation, and staff cohesiveness.

The 67-item survey was completed online and responses were tabulated into SPSS for statistical analyses. The median age of 33-42 years of age was used as a cut-off age to separate between fast-rising superintendents and non-fast rising superintendents. Utilizing an independent *t*-test, the researchers examined the differences between the two groups of superintendents on their cohesiveness, information management strategy, and openness in the budget-building process.

A multivariate analysis of variance (MANOVA) was utilized to examine the above variables and their relation to the percentage of student academic achievement, reduced-price lunch program, and per-pupil expenditure. Additionally, the researchers conducted a Pearson correlation coefficient for possible relationships between cohesiveness, information-management strategy, and openness in the budget-building process. The results of the study indicated that fast-rising superintendents' self-report of cohesiveness was not statistically significant or different to non-fast rising superintendents' cohesiveness with principals and business managers, information-management strategy, and openness in the budget building process (Bird et al., 2009).

The study also examined whether socioeconomic features, student academic achievement, and per-pupil expenditures of a school district impacted their information management strategies and openness in the budget building process. Utilizing a one-way analysis of variance (ANOVA), the researchers concluded that when the per-pupil expenditures in the district were at state-level average, the superintendents were more open in their budget-building process than superintendents whose per-pupil expenditure was below state level (Bird et al., 2009).

Another variable that was tested was the superintendents' information-management strategy. The results of the *t*-test indicated that the superintendents' information-management strategy was found to be statistically and significantly related to their openness in the budget-building process but not statistically significantly related to cohesiveness with their subordinates (Bird et al., 2009). Additional results included the superintendents' knowledge of school finance. The survey indicated that of all 37 participants, 97% agreed that they learned their current set of budget-building strategies from on-the-job training. This resulted in a limited relationship between the superintendents' professional preparation and their budget-building process. The need for openness with stakeholders was also deemed important to the budget-building process (Bird et al., 2009).

Stakeholder participation in the budget process was the subject of a study conducted by Ebdon and Franklin (2004). The researchers analyzed the effectiveness of citizen budget participation. Scholars have advocated for the inclusion of citizens in the governance process. Citizen input is generally viewed as a way to reduce the level of citizen distrust in government and to educate people about governmental activities.

Governmental agencies have utilized a variety of methods and each method has strengths and weaknesses. The purpose of this study was to attempt to identify the methods that are most effective for citizen participation in the budget process. The qualitative study consisted of 20 interviews in each city, Topeka and Wichita. The researchers chose these cities based on previous studies that indicated both cities had previously used several different citizen input methods in their budget process. The interviews consisted of open-ended questions that were meant to uncover mechanisms used by each of the cities to elicit the experiences and perspectives of the citizens throughout the budget process.

The results indicated that participation of citizens should occur early in the budget process and not at the time of adoption. Of equal importance was the need for sincerity throughout the process: both by the citizens to choose what is best for the city instead of personal reasons and for the leadership to appear as sincere and authentic as possible, with no hidden agendas. The researchers discovered that the greatest benefit for both cities dealt with the process. The process allowed for two-way communication that assisted both parties in acquiring trust, educating their stakeholders on the budget process, and empowering them (Ebdon & Franklin, 2004).

The transferring of power to the stakeholders was important for the leader of the organization. Many school districts decentralized the budget-development power from the central office to the schoolhouse. The impact of decentralization can be acquired through a process called performance driven budgeting (PDB). PDB and its impact on student achievement was the subject of this next study. Stiefel, Schwartz, Portas, and Kim (2003) analyzed the impact of the initiative on PDB on student achievement. The researchers utilized school-level data provided by the New York City Board of

Education. The panel dataset included 609 elementary and middle schools' data that ranged over a span of four years, from 1995-1999.

Performance driven budgeting began as a method utilized by school districts to transfer decision-making power from central boards of education to the school level. PDB was introduced by then chancellor of New York, Rudy Crew. The main goal of the reform was to give the schools more control over how resources are effectively allocated to improve student performance. Their quantitative study was designed to estimate the impact of PDB on the academic performance of students, as measured by standardized tests. Additionally, it measured the impact on the allocation of resources at the school level. These schools were all located in New York City and served grades four and five. The data sets were collected for these grade levels. The data set was refined to include descriptive statistics that included gender, school size, race, and eligible for free lunch, program participation, and per-pupil expenditure by school (Stiefel et al., 2002).

The results of the study indicated the PDB had an effect on grade four reading and math scores and grade five reading scores. In grade five, the per-pupil expenditure was significant in the area of reading. For all schools, the school size was statistically significant for the utilization of PDB. Additionally, there was statistical significance between the implementation of PDB and race make-up (Asian, Black, and Hispanic). Statistical significance was also evident in students enrolled in special programs and the implementation of PDB at the campus level. The results showed positive results for school districts that wanted to become decentralized. Additionally, the study indicated that stakeholders actively participated in the allocation of resources throughout the budget development process (Stiefel et al., 2002).

Searfoss and Monczka (1973) conducted a similar study on participation by stakeholders. The field study was part of a larger research effort examining behavioral implications of the budget and was designed to empirically test whether a perceived participation in the budget process increased the motivation to achieve the budget. The variables that were tested were (a) perceived participation, (b) motivation, (c) need for independence, and (d) authoritarianism. The measurement device included a 15-item questionnaire used to assess perceived participation and the superior's effort to achieve the budget. Squared multiple correlations were chosen as the initial commonality estimates. When the researchers achieved acceptable factor solutions, specific items were selected that reflected the variables to be measured and those that were clustered in a common factor. The results of the study indicated a positive relationship between perceived participation and the goal-directing effort element of motivation. In other words, participation in the budget process will influence motivation to achieve the budget. Additionally, the results revealed that as people in the organization were given larger responsibilities or were promoted, their level of participation increased.

The above studies on the budget development process indicated a need to have active participation by stakeholders in order to ensure motivation to achieve a budget that was fair and equitable. The researchers also indicated the need to utilize an efficient and appropriate method to develop the budget and highlight areas for reduction. Some of these methods highlighted for further discussion are line-item budgeting, zero-base budgeting, and site-based budgeting.

## **Line-Item Budgeting**

The most common form of budgeting approach is line-item budgeting. This is a process where individual lines are used to describe allocations for various items of expenditures, some of these being salaries, textbooks, supplies, capital outlay, and contracted services (Odden & Picus, 2004). The focus of this type of budget process is on what was purchased and not necessarily on the purpose for the expenditures. In the case of long-range strategic planning, line-item budgeting was difficult to use. One reason for this was that the line-items might include several descriptors. For instance, salaries might be budgeted under one line-item, but it will not necessarily describe the type of program the teacher services and the location of the school at which he or she is based. Line-item budgeting would not provide the superintendent with a detailed description of how much was being spent for each individual program within the school district. Likewise, this process would not provide the data that would indicate what resources were being allocated toward a particular subject or program. Therefore, it was difficult to determine whether resource allocation patterns have changed over time. However, if the line-item contained a description of the revenues and expenditures for each individual program, it would become critical to the budgeting building process. Line-item budgeting can be a hindrance because it does not give a thorough explanation of the expenditure; however, if a descriptor is added, it can lead to a better understanding of how the money was allocated within the budget so a decision can be made as to what budget functions can effectively be reduced (Lunenborg, 2010).

## **Zero-Base Budgeting**

School districts tend to use a type of budgeting process for building the next school year's budget or to implement reductions. It calls for using the previous year's budget and then increasing or decreasing certain functions (Lunenburg, 2010). Under zero-base budgeting (ZBB), district and school leaders begin with the budget process at zero every year. District and campus leaders must substantiate all expenditures—new and continuing, thus, the entire expenditure must be justified rather than merely adjusting the existing budget. The concept of zero-base budgeting is not new; former President Jimmy Carter utilized it while he was Governor in Georgia and the company Texas Instruments adopted ZBB in 1970 (Lunenburg, 2010).

Zero-based budgeting assigns units to expenditures. Then a set of decisions must be utilized to rank expenditures. Based on the rankings and the need for the expenditure, each would either receive increases or decreases while others, nothing at all (Lunenburg, 2010). The benefits of ZBB are that it provided a constant reassessment of all the school-district's programs and divisions in terms of contributions to the overall goals of the district and also allowed for facilitation of new programs. The drawbacks are that it was time-consuming and not necessarily beneficial for the development of school budgets. Schools might need to adhere to certain curriculums mandated by the state, and therefore, the school might not be able to do away with it (Lunenburg, 2010).

## **Site-Based Budgeting**

The site-based budgeting (SBB) process allows for participation from various stakeholders for the development of the budget. The most common method of site-based budgeting is for district leaders to provide a revenue budget, which is derived from three

sources: local, state, and federal revenues to each campus principal. The principal then takes the revenue figures and develops the budget based on campus' goals. Additionally, if the school has a site-based decision committee, then the committee provides input on goals and expenditures tied to each goal. Once the budget is developed, the principal submits the budget for approval to upper administration (Lunenburg, 2010).

The site-based budgeting approach was often advocated because it had two primary strengths. First, building principals could identify resource requirements of which upper administration might not be informed. Second, school principals may feel responsible for the goals of the budget because it was based on input from school members (Lunenburg & Irby, 2006). However, site-based budgeting also has its disadvantages. First, the amount of stipulations tied to the each revenue source often means principals and site-based decision making (SBDM) members will play it safe and build a budget that is much similar to the previous year. Second, it does not take into account evaluating the needs of the campus and eliminating programs, services, and supplies that the school might otherwise not need (Lunenburg & Irby, 2006). This is a problem that continues to exist because of the stipulations placed upon categorical funding by legislators. This, in turn, causes school leaders and SBDM members to do away with programs that could potentially have a negative impact on the overall instructional program.

### **Cost-Cutting Methods**

Legislators have used a variety of means to try to stave off the impact on districts of reductions in current and future revenues. After decades of litigation, the financing of public schools was exercised by the states through a variety of laws and rules.



Furthermore, taxation and distribution policies were utilized to allocate categorical aid revenues to school districts. According to Guthrie (1989) “These state mechanisms assume and reinforce the dysfunctional schism between accountability and authority” (p. 89). School-district leaders responded by allocating resources that seldom enhanced effectiveness or ensured equity. It was important that through cost-cutting efforts, the methods that yielded revenue, reduced expenditures, and allocated resources that ensured equity, were examined.

United States public school districts are collectively dealing with budget gaps that exceed \$30 billion (McNeil, 2009). School districts are examining their budgets in an effort to avoid teacher layoffs and drastic cuts to potentially sensitive programs. The high percentage of the district budget allotted to personnel costs is approximately 80% and that leaves a very small percentage for the operating expenditures of a school district. The discretionary budgets that make up the 20% go to fund transportation, maintenance and operations, supplies and materials, staff development, and technology (Sausner, 2005).

Studies have been conducted on cost-cutting methods in reaction to budgetary crisis. Bolen (2009) sought to address the key factors school districts can implement to decrease expenditures in Michigan public schools. Some of the revenue enhancements examined included (a) offering the option to outsource food services and transportation, (b) mandating the employees pay a contribution for their health insurance, (c) increasing class sizes, and (d) reducing administrative positions. The results of the study indicated that the various cost-cutting methods successfully increased the revenue of the school districts. Furthermore, the study highlighted the internal and external influences that can have an effect on the types of cost-cutting methods implemented. While some may be

feasible for some, others might not work well in a particular state or school district (Bolen, 2009).

A 2009 study conducted for the Educational Policy Institute in California (EPIC) focused on the perceptions of California K-12 superintendents with regard to the process they utilized to determine budget cuts in the district (DeVore, 2009). The EPIC survey identified a series of 13 strategies that the superintendents ranked from “Not Important” to “Very Important,” and it also included an open-ended question section (DeVore, 2009). The study had a return rate of 64% with 48 superintendents responding. The results of the survey indicated that communicating the budget problem to all stakeholders, keeping stakeholders informed throughout the budget-reduction process, developing a clear understanding of criteria utilized to make cuts, and keeping the board informed were all identified as very important by the superintendent. The “focusing on the budget-reduction problem as an opportunity for a challenge” had the lowest mean and the researchers attributed this to superintendents in California having to consistently deal with budgetary reductions on a yearly basis (DeVore, 2009).

The results of the EPIC survey indicated several recommendations for K-12 superintendents: (a) diligently work to establish positive relationships with bargaining units, (b) provide support and training for key decision-makers regarding successful decision-making strategies and a normative-rationale decision-making model, (c) maintain a strong focus on communication and consensus building before moving to the voting solution, and (d) institutionalize the importance of norms as part of the process for all stakeholders involved with the budget-reduction process (DeVore, 2009).

Additionally, a number of “how to” articles have appeared in educational periodicals and journals with respect to cost-cutting methods in Texas public schools. In Austin, Texas, Superintendent Dr. Maria Carstarphen, outlined some of the reductions that would have to take place in order to balance the district’s budget. Reductions included hiring freezes, restricting of employee travel, moving towards self-insurance, and reworking the staffing formulas (Carstarphen, 2011). Dallas ISD Superintendent Michael Hinojosa also outlined some of the cost-cutting methods that the school district considered prior to adopting the 2011-2012 district budget. Some of these included employee layoffs and voluntary resignation incentives. Looking ahead, the district is considering cuts to legal costs and possible school closures for the 2013-2014 school year (Blaize, 2011).

One of the cost-cutting methods mentioned in the previous paragraph discussed voluntary resignation incentives. This type of incentive is given to employees who voluntarily decide to resign from a school district. The school district decides on the figures to be provided. The idea behind this is that school districts will close those positions and be able to save more than what is given out as an incentive. Another incentive proposed by some districts is the retirement incentive. Promoting the retirement of teachers who have been in the system for a while and earn considerably more than a beginning teacher, will save money in the long run. However, there are disadvantages such as the loss of experienced staff, which generally tend to be the biggest contributors to the district culture and the quality of the academic program. On the other hand, the district will be able to reduce the salary budget as well as district taxes and any district-based insurance and retirement expenses (Trainor, 2009).

Doherty and Fenwick (1982) recommended a rationale for making budget-reduction decisions: (a) Reductions should be based on principles that make clear the basis for all final decisions by the school board, (b) multiple opportunities should be provided for citizen and community input, (c) budget reductions that have district-wide effects should be recommended at the superintendent's level, (d) principals and department heads should recommend budget cuts within their respective campuses tempered with district-wide considerations, (e) a full range of operations for budget reductions should be administratively determined using citizen input and tempered by professional judgment, and (f) the school board should have available multiple options and related impact statements in making final decisions regarding specific budget reductions. Additionally, Doherty and Fenwick (1982) suggested that clear and concise information that distinguishes among support services, management, and instructional functions coupled with goals for each function become invaluable pieces of information for the people involved in the budget process.

Several studies indicated the need to involve stakeholders in the budget process (Bird et al., 2009; DeVore, 2009; Ebdon & Franklin, 2004; Searfoss & Monczka, 1973; Stiefel et al., 2003), while other studies highlighted the importance of properly allocating resources (Crampton, 2009; Jones & Slate, 2010; Miles & Roza, 2006; Plummer, 2006). Additionally, the importance of how much money is required to ensure academic achievement (Cohen, Cohen, & Herman, 1981; Duke & Cohen, 1983; Jarman & Boyland, 2011; Vasquez-Heilig et al., 2010) highlighted the need to increase funding for schools servicing students of low-socioeconomic status and minorities. Although the construct of school finance was discussed extensively in the studies mentioned in this

chapter, a gap in the research existed that provided an in-depth analysis of the school-district budget functions designated for reduction that effectively reduced expenditures without significantly hindering academic achievement and fomenting equity.

DeVore (2009) discussed the need to develop a clear understanding of the criteria utilized to make budget reductions and involving the stakeholders in the process. The results of the study indicated that superintendents believed this was very important to the budget development process. Additionally, both DeVore (2009) and Bird et al. (2009) indicated the need for transparency and maintaining the district's vision throughout the entire budget-reduction process.

Transparency and open communication are extremely important. In times of drastic budget reductions, it is imperative that not only an effective budget development and budget-reduction process be implemented but a clear understanding of how the money is spent as indicated by Fullerton (2004). School-district leaders will need to implement an effective and concise method to analyze all expenditures so as to identify areas to designate for reduction while ensuring all stakeholders have a clear understanding of not only the budget process but the reason behind all budgetary reductions. Through the budgetary reduction process, how much to allocate to the instructional program will have school district leaders and campus principals questioning just how much money is enough to ensure academic success.

In summary, the persisting question in adequacy cases, legislatures, and extant literature is: Does money matter? Decades of disagreement have considered whether and how much money is enough to ensure an adequate education. However, regardless of legal precedents and the extant literature on school finance—in times of diminishing

public resources—the question is often, “What gets cut?” Throughout the budget-building process, the question of what to keep and what to discard is amorphous. Yet, when budgetary reductions are severe, cuts have a material impact on instructional programs and may have deleterious impacts on educational equity for historically underserved students.

### **Conceptual Framework**

The allocation of resources during budgetary reduction emphasize the need for school district to ensure equity for all students. This research utilized a finance equalization conceptual framework developed by Berne and Stiefel (1984). The framework addressed three components: (a) targets of equity concerns (gender, socioeconomic status, ethnicity, and disability status); (b) objects of equity (access, resources, and outputs); and (c) principles of equity (across individuals, regions, countries). Berne and Stiefel (1984) provided three different principles: (a) horizontal equity, (b) vertical equity, and (c) equal opportunity. Horizontal equity requires students who are equally situated to be treated equally by ensuring equal levels of human and material resources in hopes that they achieve similar outcomes. Vertical equity requires differentiation in the provision of unique resources (e.g., support programs) to achieve similar results. Equal educational opportunity is based on the notion that all students should be given equal chances to succeed. It requires the access of resources that equalizes the starting point for students and the conditions that allow the possibility of success for all (Jurdak, 1999).

## **Equal Education Opportunity**

Berne and Stiefel (1994) stressed the importance of measuring equity in the allocation of resources by measuring the availability of these resources for high-poverty students, students with various kinds of disabilities, and students whose native language is one other than English. The authors contended that school districts must ensure students receive more resources so they may achieve appropriate learning. The fairness of access is most often the subject of an equity definition in school finance when it comes to educating high-need students. The school reform movements and decision-making methods school districts utilize to allocate resources that are aimed at closing the achievement gaps for high-need students, have been the subject of numerous studies. However, it is important to understand how approaches to school finance equity have an impact on outputs (e.g., what schools produce, such as types of achievement and graduates) and outcomes (e.g., lifetime accomplishments and earnings).

Focusing on the output equity leads to questions about how resources should be allocated by school districts to the individual schools. The inputs (labor, equipment, dollar amount) need to be distributed effectively so that courses available at the school level, produce high-academic achievement outputs (Berne & Stiefel, 1999). Legislators, in an effort to achieve equity among property-rich and property-poor school districts, might design a school finance formula that matches spending between both types of school districts and equalizes inputs. However, the individual districts' decision-making process with respect to how the monies are allocated can have an effect on the educational opportunity for students who demographically indicate a higher need.

Equal educational opportunity is meant to prohibit discrimination against students, while the similar idea of equal protection prohibits discrimination in a wide array of public services. Efforts need to be placed on extending the legal concept of equal protection and, more recently, adequacy beyond just inputs. Emphasis must be placed on the educational outcomes and processes that can assist the courts in addressing with more specificity the types of curriculum, programs, teacher quality, or technology that constitute equal educational opportunity or an adequate education (Berne & Stiefel, 1999).

The concept of school finance equity, largely shaped by landmark court cases, is also the subject of social research that oftentimes indicates a lack of consensus among social science researchers about ‘whether money matters.’ The area of school finance equity is one where the major actors (courts, legislators, academics, and the public) are influenced by one another’s work. The work of Coleman et al. (1966) and Jencks et al. (1979) questioned the link between resources and effects in education and may have had an influence on the development of school finance equity concepts. However, more recent work has focused on the outputs, such as the study by Ferguson and Ladd (1996) that provided more distinct measures of inputs, which in turn, provided positive effects of resources on outputs.

### **Horizontal Equity**

The distinct measurement of inputs through research has largely utilized the demographics of general education, at-risk education, and special education as distinct and separate groups. Horizontal equity specifies that equally situated children should be treated equally. When analyzing inputs, intra-group equality of inputs is a reasonable



criterion to apply to these groups. As the focus moves to outputs, however, horizontal equity is more difficult to apply. Horizontal equity is a useful concept if it is measured correctly, as intra-group equality is measured with equally situated groups identified as separate in an analysis. Extensive research exists on horizontal equity using a variety of inputs and alternative statistical measures. Berne and Stiefel (1984) summarized their research in *The Measurement of Equity in School Finance*, which discussed several concepts of equity and alternative ways to measure them quantitatively. The application of horizontal equity suggests that school districts separate funding streams meant for compensatory or other purposes from streams meant for all students. This will ensure that school districts can measure horizontal equity (Berne & Stiefel, 1984).

### **Vertical Equity**

While the concept of horizontal equity states that equally situated children should be treated equally, vertical equity specifies that differently situated children should be treated differently. Vertical equity calls for the identification of groups of students who differ in their input needs. Adjusting the inputs will assist in achieving defined levels of outputs; thus, vertical equity ties input equity to output equity. Adjustments to funding should be made depending on the level of need, and weights or formulas are applied to these students. School finance legislation has addressed vertical equity by weighting students according to their needs of costs. Vertical equity is an appealing concept because it takes into account differences among pupils and outputs. Federal legislation, such as Title I and the Individuals with Disabilities Act (IDEA), is based on a vertical equity idea (Berne & Stiefel, 1999).

Several studies confirmed that resources affected outcomes (Ferguson & Ladd, 1996; Krueger, 1999; Mosteller, Light, & Sachs, 1996). This research can be interpreted to mean that when resources are used well, they affect outcomes; but when they are used poorly, they do not. Within-district inequities and differences in property-wealth bases lead to unequal educational outputs, especially for students of low socioeconomic status, at-risk students, and students with special needs.

The examination of the budgetary reduction process at the district and campus level is useful in examining how school leaders ensure that vertical equity is a priority when fiscal deficit exists. One of the constants in school finance analyses over the past two decades has been the use of the school district as the primary unit of analysis. More recently, researchers have begun to analyze the allocation of resources at the campus level. The growing belief is that the most critical activities are those closest to the child at the school level. The authors believe that focus should be placed on the allocation of resources at the campus level. The examination of the school-district budget has implications for improving the processes by which school-district leaders assist campus principals in making budgetary reductions while ensuring vertical equity (Berne & Stiefel, 1984).

### **Summary**

This chapter provided an in-depth review of the literature that began with an overview of school finance and a review of the budget-development process. The concepts of horizontal and vertical equity, through the work of Berne & Stiefel (1984), suggest the need to effectively allocate resources to ensure academic achievement and close the achievement gap. School leaders and policymakers must possess a clear

understanding of not only how much money is needed to educate all students but also how money is being spent. Through this study, an examination of the allocation of resources during times of financial crisis was examined. The following chapter provides a discussion of the methodology to be used for purposes of this study.

### **Chapter 3: Methodology**

The current chapter outlines the research design and procedures that were utilized in the collection of the data for the study. In this chapter, the researcher reviews the design, the sample, and the instruments for data collection. The purpose of the study was to examine the budget-reduction process utilized by high-wealth property school districts and low-wealth property school districts in Texas. Furthermore, an in-depth examination of the district-level budget function was conducted in order to determine whether a statistical significance in mean differences and per-pupil expenditures for the various budget functions was evident in high-wealth property school districts versus low-wealth property school districts. Additionally, the reductions were further examined for any inequities that surfaced as a result of the budget reductions for both types of school districts.

#### **Research Questions**

To accomplish the primary objective of this study, the examination of budget reductions in high-wealth and low-wealth school districts, the study focused on the budget-reduction priorities and process at the district level for high-wealth property school districts and low-wealth property school districts in Texas. Furthermore, the study examined the reductions in per-pupil expenditure by function for both high-wealth property and low-wealth property school districts and the inequities that surfaced as a result of the reductions. To accomplish the examination, this study attempted to answer the following questions:

1. What budget-reduction options are prioritized at the district level for high-wealth property school districts versus low-wealth property school districts?

2. What budget-reduction process was utilized at the district level by high-wealth property school districts and low-wealth property school districts?
3. What district-level budget functions were slated for reduction at high-wealth property and low-wealth property school districts and what are the equity implications that surfaced as a result of the reductions?

### **Research Design**

The study was conducted utilizing a mixed-methods design. Mixed-methods research allows for working with different types of data or working with different research paradigms (Lyons & Doueck, 2010). Mixed-methods research assists the researcher's total understanding of the research problem. It allows for triangulation of data to increase the validity of the results, and it allows for one method to assist in informing the second method (Hesse-Biber, 2010). The quantitative data allow for statistical analyses and standardized tests of reliability and validity. In turn, qualitative data illuminate the meaning of statistical results by adding a narrative understanding to quantitative research.

The paradigm that guides the quantitative method of inquiry is based on the assumption that social reality has an objective ontological structure, that individuals are responding agents to this objective environment, and that there is an objective truth existing in the world that can be measured and scientifically explained. Quantitative research involves counting and measuring events and then performing a series of statistical analyses of a body of numerical data (Smith, 1988). In contrast, qualitative methodological approaches stress the importance of multiple subjective realities as an important source of knowledge building. The epistemology of this paradigm holds that

knowledge gathering and truth are always partial. The researcher's values, feelings, and attitudes cannot be removed from the research relationship but instead should be taken into consideration when interpreting the data. Additionally, the reciprocal relationship with research participants promotes an interactional, cooperative construction of meaning (Hesse-Biber, 2010).

### **Sample Population**

The sample for this study was comprised of one high-wealth property school district and one low-wealth property school district in Texas. The data collected from the two school districts were utilized to answer both the online survey and semi-structured interview. The survey and interview were utilized for the qualitative section of the study. The respondents were limited to the district superintendents, chief financial officers, and a school board member from each district. To collect data for the statistical section of the study and to examine budget reductions at the district level, the sample was expanded to a random selection of 60 school districts, 30 of which are high-wealth property and 30 of which are low-wealth property school districts.

### **Data Collection Methods**

Once IRB approval was granted, the researcher began the collection of data. The researcher was granted permission to conduct the qualitative section of the study at the selected high-wealth property and low-wealth property school districts. All respondents were asked to sign the consent for participation form provided by the researcher. Additionally, the researcher collected the 60 randomly selected district-level budgets for school years 2010-2011 and 2011-2012, utilizing the Texas Education Agency PEIMS Financial Reports for each school district.

## **Survey**

The researcher utilized a survey developed by the Educational Policy Institute of California (DeVore, 2009). The survey (Appendix A) was tested for reliability and validity with current and former practicing superintendents. The 5-point Likert-scale survey included 13 strategies pertaining to the budget and cost-cutting processes, demographic information, and an open-ended response section. The open-ended section was included in order to gather information on other strategies that superintendents perceived as priorities and any hindrances associated with the budget process. Additionally, it allowed the researcher to gain a further understanding of the participants' perspective regarding the budget process. Through the consent form, participants were assured their responses were confidential.

## **Interviews**

In addition to the survey, the researcher conducted a semi-structured on-site interview (Appendix B) with the high-wealth property and low-wealth property superintendent, chief financial officer, and school board member. The purpose of the semi-structured interviews was to identify emerging and consistent themes related to the topic of budget development and reductions utilized by district leadership.

## **Document Analysis**

To examine the areas designated for budget cuts, the researcher obtained the 2010-2011 and 2011-2012 school-district budgets for the randomly selected school districts. The budgets were obtained through the Texas Education Agency PEIMS Financial Reports. The data were downloaded in Excel format and analyzed utilizing SPSS software. The district-level budgets provided the researcher with an in-depth

examination of the budget functions that were slated for reduction, maintained, or raised for the 2011-2012 school year.

### **Data Analysis**

To answer the first research question, “What budget-reduction strategies are prioritized at the district-level for high-wealth property school districts versus low-wealth property school districts?” the researcher utilized a 5-point Likert-scale survey on the prioritization of budget-reduction options. Surveys allow for the researcher to obtain a “panoramic view” of the problem to be analyzed and provide a participant perspective in the study (Denscombe, 2010). The data collected from the survey were analyzed utilizing descriptive statistics. Descriptive statistics are used to present quantitative descriptions in a manageable form and allows for comparisons of survey responses. Additionally, the researcher analyzed the open-ended responses from the respondents of both school districts in order to determine common patterns and emergent themes.

Comparisons were also made between the responses from participants in high-wealth property school districts and low-wealth property school districts included in the study. To further explore the responses, the researcher utilized descriptive statistics to analyze responses of participants within the same category of high-wealth property school districts and low-wealth property school districts. This was useful in making comparisons of similarities and differences in the responses of the participants that are located within the same type of school district. The researcher also analyzed all participant responses from the open-ended section of the survey. This assisted in adding a “respondent voice” to the study and allowed for participant perspective on the budget-reduction process.



The second research question, “What budget-reduction process was utilized at the district level by high-wealth property school districts and low-wealth property school districts?” was answered by utilizing semi-structured interviews. These interviews involved a set of assumptions and understandings about a situation that are not normally associated with a casual conversation. The interviews provided the researcher with insight on participants’ opinions, feelings, emotions, and experiences. The interview also allowed the researcher to determine common patterns in responses and emergent themes. The topics that were covered in the interviews revolved around the budget-development process, particularly when deciding on budget reductions. The semi-structured interviews allow for the participant to develop his/her own ideas and speak more widely on the issues raised by the researcher (Denscombe, 2010).

The researcher answered the last research question “What district budget functions were slated for reduction at high-wealth property and low-wealth property school districts and what are the equity implications that surfaced as a result of the shortfall?” by examining the district-level budgets for 60 school districts across Texas. The increase in the number of school districts selected for this research question allowed the researcher to examine whether significant differences existed in the budget functions slated for reduction in high-wealth property school districts versus low-wealth property school districts in Texas and whether inequities in the allocation of expenditures surfaced because of the reductions. The examination was conducted utilizing an independent *t*-test statistical analysis (Coladarci, Cobb, Minium, & Clarke, 2008). The independent *t*-test is a statistical technique that is used to analyze the mean comparison of two independent groups (Hesse-Biber, 2010). The researcher obtained the per-pupil expenditure for each

budget function by school year for both high-wealth and low-wealth property school districts utilized in the sample. The per-pupil expenditures for school years 2010-2011 and 2011-2012 were utilized to examine the differences in the means. Once the per-pupil expenditure was obtained, the researcher analyzed the data to obtain the per-pupil change by year. The independent *t*-test was applied to each per-pupil change by function and district type. The data were utilized to determine whether a statistical significance in the per-pupil expenditures and per-pupil change existed between the high-wealth and low-wealth property school district sample by school year.

### **Summary**

The study examined the prioritization and budget-reduction process of high-wealth property school districts and low-wealth property school districts in Texas through the utilization of surveys and semi-structured interviews. The study also examined district-level budgets in order to determine the budget functions that were slated for reduction, raised, or preserved for the 2011-2012 for high-wealth property and low-wealth property school districts and whether inequities surfaced as a result of the shortfall.

## **Chapter 4: Results and Analysis**

### **Introduction**

The purpose and design of this research study sought to examine the budget-reduction process as a result of the Texas budget shortfall for high-wealth property and low-wealth property school districts for budget years 2010-2011 and 2011-2012. In order to conduct the data analysis, a mixed-methods approach proved necessary to determine budget-reduction prioritization, identify the budget-reduction process, identify the changes in budget allocations by function for the sample size (n=60) adopted district-level budgets, and examine the equity implications as a result of the budget shortfall.

The budget functions examined for statistical significance included instruction, library services, staff development, district administration, campus administration, health services, transportation, social services, extracurricular, general administration, maintenance, data processing, and community services, and payroll. The researcher included the payroll per-pupil expenditures for each school district because of the approximate 80 to 85 percent allocation for this expenditure as opposed to the 15 to 20% that is allocated to the other budgetary functions. Quantitative statistical analysis utilized an independent *t*-test and qualitative interpretive methodology was applied through a thorough and rigorous review of data associated with the budget-reduction process for both school districts.

The examination on the prioritization of budget reduction through the 5-point Likert-scale survey revealed that both types of school districts made very similar choices when deciding how to prioritize and implement the budget cuts. Furthermore, the semi-structured interview revealed that both types of school districts struggled with the same

issues as they underwent the budget-reduction process and emphasized total transparency and stakeholder collaboration.

The districts selected for the qualitative section of the study were purposeful. Both had similar demographics, enrollment numbers, and number of employees in the district. The results drawn from these two school districts could be generalized beyond this sample because most of the school districts in Texas have similar enrollment figures. The descriptive statistics for the district are presented in Table 1.

The quantitative section of the study included a random selection of 30 high-wealth property and 30 low-wealth property school districts. The quantitative analysis by budget function for school years 2010-2011 and 2011-2012 proved to be statistically significant in the areas of instruction, security services, and payroll. Additionally, the means for each school-district type revealed that both districts underwent budget reductions in the majority of budget functions. The examination of the budget reductions also led the researcher to determine that some programs and services aimed at students who were either economically disadvantaged, at-risk, or a minority subgroup, were either eliminated or experienced a reduction in the per-pupil expenditure allotment. In order to facilitate a deeper understanding of the process, prioritization, and budget reductions, the results of this study will be presented by each research question.

### **Research Question 1**

What budget-reduction options are prioritized at the district-level for high-wealth property and low-wealth property school districts?

A survey was conducted to answer this research question. The 5-point Likert-scale survey was given to the superintendents of each district, the chief financial officers,

and a school board member (see Table 2). The survey included some general information that pertained to the years served in the district, the number of employees in the district, and school-district budget in millions. Additionally, the survey included 13 statements that allowed the respondent to rank them according to what they perceived as being a low-priority to a very high priority in the budget-reduction and development process.

The low-wealth property school district's superintendent and chief financial officer have both served the same number of years in the district: 0-5 years. The school board member who participated in the study had served between 5 to 11 years. In the high-wealth property school district, the superintendent had served between 6-11 years, similarly to the chief financial officer. The board member had served between 11-15 years. The results of the survey are indicated in Table 3 of the study.

On January 17, 2012, the researcher traveled to The Rio Grande Independent School District to personally interview each respondent and conduct the survey. The results of the survey indicated that the superintendent and school board member believed the "development of a clear organization's vision" was a very high priority for the district while the chief financial officer deemed it somewhat lower as being a high priority. The results also indicated that all respondents deemed

communication of the budget problem to stakeholders, keeping all stakeholders informed of the process, involvement of a decision-making team, prioritization of possible solutions to the problem, clarification of the decision-making process to all stakeholders, using of several data sources to make an informed decision, and keeping the board informed of each step

as very high priorities for the district. Although all respondents believed the "inclusion of stakeholders" as a very high priority, "a cross-section of stakeholders" was not rated as high. Additionally, all three respondents did not rate the strategy of "establishing a

collaborative relationship with teacher organizations prior to the onset of the budget crisis,” as a very high priority. The “working for consensus rather than a vote, encouraging creative brainstorming to generate possible solutions, and the establishing of norms for all decision teams and stakeholders” received a high priority rating by the respondents.

The survey also contained two questions that allowed for the respondents to include any strategies that they deemed as a priority and any hindrances they might have encountered throughout the process. The Rio Grande ISD respondents indicated that the district “holds budget meetings, separate and apart from the regular school board meetings.” The chief financial officer stated, “I educate the board on any budget issues that might arise and keep the board informed on why certain capital projects will have to be postponed due to the budget shortfall.”

The superintendent said,

I include a section on the district’s financial status in the weekly newsletter to the school board. I also require every campus principal and head of department to justify any new initiatives, how they will affect the overall program and its cost-effectiveness.

The school board member from Rio Grande ISD discussed the importance of not firing district employees. The board member stated, “The district chose to close positions through attrition.”

On January 24, 2012, the researcher traveled to Texas Independent School District to conduct the survey. The results of the survey indicated that the superintendent, chief financial officer, and school board member rated a very high priority the

development of a clear organization’s vision for the budget-reduction and development process, keeping all stakeholders informed of the whole process,

keeping the school board members informed of each step, communicating a clear understanding of the budget problem to all groups/stakeholders, involvement of a decision team in generating and prioritizing possible solution criteria.

Both the superintendent and chief financial officer (CFO) both indicated “establishing norms for all decision teams and groups/stakeholders” as a very high priority, while the school board member indicated it only as a high priority.

All three respondents agreed that a high priority in the process is to “develop a clear understanding of the criteria prior to developing the solutions.” All respondents prioritized the encouraging of brainstorming to generate possible solutions as high. The school board member rated high, the “involving a cross section of stakeholders,” while the superintendent and CFO cited this as a very high priority for their district.

The superintendent and CFO cited the “providing of data sources to make informed decisions” as a very high priority; however, the board member only cited this as high. All three respondents rated the allocation of resources that ensure equity as a major focus in the process, as high. However, Texas I.S.D saw the “collaboration of teacher organizations in the budget-reduction process, prior to the onset of the budget crisis” as a very high priority.

In the open-response section of the survey, the superintendent indicated that a very important priority is to ensure transparency throughout the entire budget-reduction process. The superintendent believed that total transparency should always be the standard between department, campus, and district leadership, especially when faced with critical issues such as a financial shortfall. Additionally, the superintendent indicated that a hindrance is making the board members understand why a certain one-time expenditure, such as the purchase of a new school bus, was eliminated from this year’s

budget. The superintendent indicated that due to budget constraints, planned capital-projects had to be put on hold. The chief financial officer also wrote about transparency and added that it was extremely important for the community to understand the reasons why budget reductions are being made. The school board member also posited transparency as an important strategy to the budget process. In the section that asked for hindrances in the budget-reduction process, the board member discussed the status of the school finance situation at the federal and state levels. He also indicated that the designation of the district as a Chapter 41 meant the district is subject to the recapturing of the school-district's property tax collections.

### **Summary for Research Question 1**

The survey indicated that both superintendents believed a very high priority was to inform the school board of the budget-reduction process. The superintendents also indicated as a priority, the communication of the budget-reduction process to all stakeholders. The chief financial officers were also consistent with the superintendents' prioritization strategies. Additionally, both the superintendents and the chief financial officers of both school districts deemed the developing of a clear understanding of the criteria utilized to make decisions on what to cut as a very high priority. The board members also believed the above-mentioned strategies were very high priorities but included in their open-ended response the need for total transparency throughout the budget adoption and reduction process and the importance of keeping as many people employed as possible.



After each respondent had completed the survey, the researcher conducted a semi-structured interview with the respondents of both school districts. The interview responses were utilized to answer the second research question in this study.

### **Research Question 2**

What budget-reduction process was utilized at the district level by high-wealth property school districts and low-wealth property school districts?

The semi-structured survey was conducted independently with each respondent from both the high-wealth and low-wealth property school districts. In order to organize the responses more effectively, the researcher based the selection of the emergent themes on the Harvey, Bearley, and Corkrum (1997) *Six-Step Problem-Solving Model*. This model focuses on consensus building strategies using a six-step cyclic approach characterized by the following steps: (a) Mind-Set, (b) Problem Definition, (c) Solution Criteria, (d) Possible Solutions, (e) Solution Choice, and (f) Implementation. Figure 1 illustrates the model.

The mind-set is aligned to the development of the vision, ensuring that everyone is on the “same page.” This is where the organizational context is important and where the school leaders need to ensure that the school district has a clear vision, and they understand the parameters so as an organization, the goals can be developed. This is the first step in the model and through the collaboration with stakeholders; the organization completes steps 2-5. The emergent themes that resulted from the responses included vision, stakeholder participation, transparency, prioritization of expenditures and budget reductions, equity, impact of budget reductions, and trust. These topics align to the *Six-Step Problem-Solving Model*, because they assist in building consensus with stakeholders

and are important to the success or failure of the budget-reduction process. Ultimately, the budget-reduction process ends with the sixth step, which is the actual implementation of the budget, once it is adopted by the school board.

## **Vision**

Maintaining of the vision throughout the budget-reduction process was discussed with all respondents. According to the superintendent of Texas ISD, “Our vision and goals are what drives the budget-reduction process. The goals that we want to accomplish are driven by the vision of the district.” The superintendent of the Rio Grande ISD felt that the vision was important and added, “Whatever the district vision is and my vision is, needs to be in sync with our goals and these goals are justified to the school board. The vision leads the budget.” The chief financial officers of both districts agreed with the vision driving the goals. The Texas ISD chief financial officer indicated that, “The vision is tied to their strategic plan.” While the chief financial officer from Rio Grande ISD cited that, “the vision and goals are tied to our yearly goals and these goals are what drive the budget.”

Slosson (2000) indicated that goals should ideally be linked directly to the budget-building process. The budget should address the priorities the school district is trying to accomplish. Both school board members discussed the need to develop goals when undergoing the budget-reduction process. The Rio Grande ISD district board member stated, “All of the district goals that are set for the year are aligned to the district’s vision.”

## **Stakeholder Participation**

A formal school process for budget development appears to increase the involvement and satisfaction of different stakeholder groups (Goertz & Hess, 1998). All respondents described stakeholder participation as an action involving collaboration. The superintendent from Rio Grande ISD school district stated, “We discuss with the stakeholders where we are in terms of expenditures and where we need to be for the following school year.”

The Rio Grande ISD CFO stated,

Beginning in the month of February of every year, we take the budget calendar to the school board. We have monthly meetings that are open to the public that involve stakeholders such as department administrators and principals. I literally bring out a white board and educate the stakeholders on factors such as our tax rate and personnel costs. I also make it clear that we have some issues going on such as high absenteeism and we discuss ways to rectify it.

The superintendent from Texas ISD property school district also mentioned their monthly budget meetings and budget calendar where “discussion on the budget items and expenditures are discussed and open to the public.”

The CFO stated,

We meet with all of our staff and explain the situation to them. We also meet with every department-head and do the same thing. We have complete collaboration with every campus and department leader. They need to understand the process so they can support it.

The trustee from Rio Grande ISD said,

We hold monthly board meetings where discussions on the budget take place. These meetings are open to the public, and we make sure there is media present so that the community members who cannot attend can have access to the information.

Slosson (2000) indicated that educating the staff and stakeholders about the budget is important when undergoing the budget process. Slosson stated, “You need a process and everyone, whether or not they agree, needs to see the process happen in a public arena” (p. 2). The stakeholders need to know where the money is being allocated, where it comes from and where it goes. The participation of stakeholders ensures buy-in and ensures they will be motivated to provide input.

The trustee from Texas ISD said, “We looked at several scenarios as a school board, brought to us by the superintendent and CFO. We discussed what each budget reduction would mean to every program and we prepared for the worst.”

### **Transparency**

Bird et al. (2009) discussed the role that transparency has in the budget process as leading to a supported budget that is easily understood by the stakeholders. According to the Rio Grande ISD superintendent, “Transparency is what leads to a good relationship with all stakeholders and it is crucial with the school board. They need to be informed at each step of the process.”

The superintendent of Texas ISD said

I am very big on transparency. I think it’s really important to share everything with the school board. There are no surprises. Although it might not be a good thing to say, the shortfall is a reality. They need to understand where we are and why decisions are being made. We ensure that the stakeholders have a thorough understanding of what the budget reductions look like. Through our budget meetings, we ensure that a discussion on the status of the district budget takes place.

The school board member for Rio Grande ISD stressed the importance of having budget meetings that are open to the public and added, “We don’t hide anything from the community.” The school board member from Texas ISD stated that, “The superintendent

had prepared them for the worst case scenario. Teachers and administrators were supportive because they understood the situation and were well informed.” The CFO from Texas ISD added that the district “ensures that each department head is familiar with the budget process and that there is total transparency when budget reductions need to be made.”

### **Prioritization of Budget Expenditures and Reductions**

The superintendent of Rio Grande ISD stated, “Communication has taken place between the board and I with regards to certain capital projects that will not be built in the upcoming school year due to the shortfall.” The superintendent indicated that they would need to utilize approximately \$1.4 million from fund balance in order to balance the budget for the 2012-2013 school year.

The school board member from Rio Grande ISD said,

The superintendent has explained to us that we will need to place on hold projects such as the re-roofing of the high schools and replacement of air conditioning units at the schools. The superintendent has done an excellent job with the budget process that we know where each expenditure is done, down to the penny. The superintendent gives us a report on where we are in terms of capital projects, improvements, and purchases. Once we have the full picture, we then make decisions as to which projects or expenditures we are going to prioritize. For example, we know that our district needs to improve on academics so we prioritized the hiring of a curriculum administrator to assist with that goal.

The CFO from Rio Grande ISD indicated

The district will need to be frugal in the upcoming school year and have done an analysis of the district’s staffing formulas. None of the compensatory and discretionary funding was shifted to alleviate the reductions in payroll. The district had conducted a 5-year study on staffing formulas and based on the results of the study, the districts has been very careful when making personnel decisions.

Through attrition, the district will close position for the 2012-2013 school year. The CFO from Texas ISD also discussed utilizing attrition to close positions. He stated, “The

district has closed several positions and has upped the seat count in order to keep from hiring additional teachers.”

The superintendent from Texas ISD said

We respect campus initiatives and discuss them with the principals. We analyze the budget and prioritize according to the goals. We had an across-the-board 10% budget reduction for the 2011-2012 district budget. We are expecting to do the same next school year. However, we meet with each department administrator and campus principal with respect to their programs. Together we decide which ones we keep and which ones we will need to forgo.

Taking a close look at district program initiatives was a common theme when prioritizing budget expenditures. The collaboration by district and campus leaders was deemed by all respondents as critical, especially when prioritizing budget expenditures. The CFO from Rio Grande I.S.D indicated that the district “analyzes all district program initiatives, together with district and campus leaders. All budgets are developed based on funding formulas and campus or district needs and initiatives.”

## **Equity**

A study by Jones and Slate (2010) examined the effect of non-compliance with the 65% instructional expenditure ratio. The study indicated that school districts that spent less than 60% of their monies on instructional expenditures had the lowest percent passing rates on TAKS. When the passing rates of Hispanic students were analyzed, the poorest passing rates were in the less than 60% of instructional expenditures ratio schools. The district superintendent of Rio Grande ISD indicated that they ensure equitable distribution of instructional funds, especially to programs such as bilingual and special education.

The CFO of Rio Grande ISD said,

I educate the departments on issues such as supplementing and supplanting. Each special program has its part in the strategic plan and we ensure that the departments justify their expenditures while also following the guidelines and ensuring equity.

The superintendent from Texas ISD indicated that some “initiatives had to be cut but not those that are designated as special programs.” The CFO indicated that a careful analysis of each school’s master schedule is done so as to ensure they have the correct staffing ratios. Additionally, the district instituted a 10% across-the-board budget cut but made sure that they preserved the budgets for special programs. The board member from Texas ISD stated, “If any program was eliminated, it was based on the principal’s recommendation. No special program was affected but I do know that some of the enrollments in certain grade levels went up.”

### **Impact of Budget Reductions**

By most estimates, 85% of school and district budgets are devoted to salaries and benefits. The figure indicates that cutting budgets significantly without reducing employees or their compensation is next to impossible (Odden, 2000). Analysis of personnel units, closing positions, and attrition were common themes among the respondents (5 out of 6). The budget shortfall impacted the staffing ratios for both school districts.

The Texas ISD superintendent said,

We did not replace 11 individuals for this school year. We planned on cutting 16 positions but through attrition, we were able to close them. Enrollment went up in some classes. I hope that it does not affect how we do on S.T.A.A.R (State of Texas Assessment of Academic Readiness). We also put the purchasing of some items on hold. We were going to buy an additional school bus, but we have suspended that at this time.

The superintendent from Rio Grande ISD said,

When I first got here, I almost resigned the same day. The district had no procurement policies in place. There was a huge deficit and the district had no staffing formulas in place. There was a huge discrepancy in the amount of personnel for each school. Through attrition, I have been able to balance personnel, while at the same time balancing the budget. Every position that is now filled will have to be carefully analyzed based on the needs of the district. We will have to use some of the district's fund balance in order to balance the budget. The academic pressure is on and the financial assistance is decreasing.

The Rio Grande ISD trustee also talked about the various scenarios that were presented by the superintendent and added, "We had some hard decisions to make such as the suspension of some planned capital projects, but overall we need to do what is best for the district."

The CFO of Texas ISD said,

We looked at what each campus' staffing ratios, especially in the core academic areas. We analyzed the master schedule very carefully. We did have enrollments go up in some areas and we did cut a few initiatives but it was done through principal input. Last year we didn't know what to expect. The figures kept changing. For next year, we will continue to analyze staffing ratios and if we have to, we will eliminate through attrition.

The trustee from Texas ISD said,

The process was very difficult last year. We didn't know what was going to happen. We made a decision that we would not cut personnel and that will continue to be a priority for next year's budget. Some of the one-time budgeted items will probably be scrapped for next year. We did that last year for this year's budget, we scrapped one-time purchases versus cutting a program or hurting the instructional program.



## **Building Trust**

The nature of the budgeting process does not lend itself to easy school board involvement. However, one of the few exceptions is when a projected significant revenue shortfall forces the school board to prioritize programs and functions (Eadie, 2005). The topic of trust between the superintendent and school board members was the emergent theme among the respondents in the “additional comments” section of the semi-structured interview. The superintendent from Rio Grande ISD discussed how he has shown the board “the big picture” in following what the legislature required the district to do with respect to budget cuts. He stated, “Developing a relationship with the school board is very critical. The board is always aware of any issues with the district budget prior the board meeting.” The CFO of Rio Grande ISD said,

The school board is very supportive of us and they understand that we have the capacity to deal with any fallout, such as the budget shortfall. Through the educating of the staff and department directors, we have been able to be very transparent. We analyze every expenditure that hits our desk and make sure it is aligned to the district’s strategic plan, campus improvement plan, and district vision.

The school board member from Rio Grande ISD said, “We support our administration. They are very good at keeping us informed.” The school board member from Texas ISD indicated how the district leadership had done “an outstanding job in preparing us for the worst case scenario. We were informed and with the cooperation of the superintendent, CFO, and principals, we made it work.”

### **Summary for Research Question 2**

The semi-structured interview highlighted the process that both types of school districts underwent as they made reductions to the district budget. Both superintendents

indicated the importance of ensuring that all stakeholders have a thorough understanding of the budget crisis. The chief financial officers of both districts also indicated that it is very important to include a report on the district budget at every school board meeting, including developing a budget calendar that finalizes with the adoption of the budget. The interview also indicated that it was very important to the superintendent, the CFO, and the school board members that no one in their respective district was let-go because of the shortfall. Both school-district respondents indicated that most positions were eliminated through attrition and that a careful analysis of the budget was used to determine which positions were closed and which ones were replaced. The respondents also indicated that some of the impacts of the budget reduction dealt mainly with higher enrollment in some classes and the placing on hold of some capital projects that were slated to begin this school year. Overall, both superintendents indicated their uncertainty at the onset of the budget shortfall, which led their leadership and school board to develop various scenarios prior to this school year's budget adoption. Once they knew how much they were going to be cut, they were then able to move forward and adopt a budget. The responses indicated that it is important to have a plan that is collaboratively developed with stakeholders and that a clear understanding of the budget crisis is communicated to the community. The responses also indicated that it is important to analyze the district budget very carefully so that the overall educational program is not affected when budget reductions need to be made.

The survey and semi-structured interview focused on a given set of priorities and strategies that were applied to the budget-reduction process. The respondents were asked to rate the priorities and secondly, to respond to a given set of questions focused on the

process. The third research question applied quantitative methods that compare the mean scores of two groups on a given variable. The researcher expanded the sample in order to determine which budgetary functions were reduced by both high-wealth property and low-wealth property school districts and to examine the inequities that surfaced as a result of the reductions.

### **Research Question 3**

What district-budget functions were slated for reduction at high-wealth property and low-wealth property school districts and what are the equity implications that surfaced as a result of the reductions?

The researcher sought to determine whether there was a statistical significance in the mean difference of budget functions for both low-wealth property and high-wealth property school-district's budgets. The years utilized were the 2010-2011 and 2011-2012 school year district-level budgets. The functions and expenditures that were examined were instruction (function 11), library services (function 12), staff development (function 13), instructional leadership (function 21), campus administration (function 23), guidance and counseling (function 31), health services (function 32), social services (function 33), transportation (function 34), extracurricular activities (function 36), general administration (function 41), maintenance (function 51), data processing (function 53), community services (function 61), and payroll.

The statistical method used to determine whether differences existed was the Independent Samples *t*-test, which compares the means of two groups. The Levene's test for Equality of Variances was reviewed for each function, which takes into account the degree of polarity in the dollar amounts for each function. The statistics were run using

the .05 level of confidence. The researcher also utilized descriptive statistics to determine the means for each per-pupil expenditure for the school years 2010-2011 and 2011-2012. The descriptive statistics were also analyzed by district type. The results of the descriptive statistics are found in Appendix C of this study.

The independent samples *t*-test was applied to the each change in per-pupil expenditure for school years 2010-2011 and 2011-2012. The researcher obtained school-district budgets from the Texas Education Agency Public Education Information Management System District Budget Reports for both school years (TEA, 2012). The sample size was (n=60), 30 high-wealth property school districts and 30 low-wealth property school districts. The reports were broken down by per-pupil expenditure, by function. The researcher used this data to obtain the difference in the per-pupil expenditure dollar amount designated for each budget function from the school year 2011 to school year 2012. Once the amounts were obtained, the researcher then conducted the statistical analysis. The results of the Independent *t*-test are illustrated in Table 4 of this study.

The results of the data (Table 4) indicated a statistical significance in the area of instruction (Function 11) (M=-\$241.87, SD= 280.15) for the high-wealth sample and (M=-24.20, SD= 292.55) for the low-wealth sample, conditions:  $t(-2.94) = 58, p = .005$ . The results of the data show that the budget shortfall had a significant effect on the reduction of per-pupil instruction allotment for both types of school districts.

The overall per-pupil expenditures (Tables 4.1 and 4.2) proved to be significant for the budget functions of instruction and data processing at a confidence interval of .05 for the school year 2010-2011 (Mean Difference=697.11)  $t(3.39)=58, p=.001$  and school

year 2011-2012 (Mean Difference= 467.90), conditions:  $t(2.11)=58$ ,  $p. 039$ . The high-wealth school districts' per-pupil expenditure for instruction was approximately \$700 more than the low-wealth school districts. Statistical significance was also evident for the school year 2011-2012 with the high-wealth school district spending approximately \$470 more per student than the low-wealth districts. The instructional expenditures are utilized for activities that deal directly with the interaction between teachers and students (TEA, 2007).

The results of the  $t$ -test also indicated a statistical significance in the area of data processing per-pupil expenditures for school year 2010-2011 at a confidence interval of .05 (Mean Difference -\$55.29) conditions:  $t(-3.426)=58$ ,  $p. 001$ . The high-wealth property school districts increased this expenditure for the 2012-2013 school year. This function deals with the upkeep and maintenance of technology equipment for the school district as well as personnel that deal directly with this function. The high-wealth school districts had a higher mean (168.97) than the low-wealth school district (102.90) for this expenditure. However for the budget functions of social services (Mean Difference = -17.20), conditions:  $t(-2.135) = 58$ ,  $p. 037$  and security services (Mean Difference = -29.97), conditions:  $t(-2.570)=58$ ,  $p. .013$ ), the low-wealth school districts allocated more per pupil than the high-wealth districts for the 2011-2012 school year. The results of the per-pupil expenditure  $t$ -tests support the findings of the descriptive statistic data table. The high-wealth school districts spent more money per-pupil almost every function with the exception of social services, security services, and data processing. For the 2011-2012 school year, the high-wealth school districts did decrease their operating expenditures for almost every function but continued to spend more money than the low-wealth districts.

The low-wealth district did have some increases in the per-pupil expenditures in the areas of staff development, instructional administration, social services, health services, transportation, and security services. However, the increases were minimal in almost every one of these areas.

The differences in the per-pupil expenditures, especially in the area of instruction, reveal inequities that exist in the distribution of funds by the state to public schools. The high-wealth districts spend more per student overall than the low-wealth districts for both school years. This did not change despite the budget reductions that took place for the 2012 school year. The high-wealth school districts continued to spend more than the low-wealth school districts.

These differences highlight the fact that the Texas school finance system continues to be inequitable. High-wealth school districts are still spending more per student than the low-wealth school districts. The budget reductions that took place as a result of the shortfall made the disparities even larger. The low-wealth school districts will continue to struggle with equalization unless the school finance system is revamped. The shortfall has forced district leaders to examine these inequities, and many have responded by filing lawsuits that call for an overhaul of the Texas school finance system.

The per-pupil expenditure mean-change *t*-test (Table 4) indicated a statistical significance for the budgetary function of security and monitoring services (Function 52) for both high-wealth ( $M=-\$5.17$ ,  $SD= 12.44$ ) and low-wealth school districts ( $M=4.03$ ,  $SD= 20.47$ ), conditions:  $t(-2.10) = 58$ ,  $p=.040$ . The data results for this budget function indicated the shortfall had an effect on the per-pupil expenditures for this function for the school year 2011-2012. The results of the *t* test also indicated a variation with the high-

wealth sample decreasing the per-pupil expenditures and the low-wealth sample increasing the per-pupil expenditure for this function. This budget function generally referred to expenditures/expenses utilized for activities to keep students and staff surroundings safe, whether in transit to or from school, or on a campus, or when participating in school-sponsored events. The expenses are generally utilized to purchase security vehicles, to provide game security at athletic events, or to pay for outsourcing security services (Brownsville ISD, 2012).

The last expenditure, payroll, yielded a statistical significance in the per-pupil allotment expenditure for high-wealth ( $M=-299.73$ ,  $SD=363.60$ ) and low-wealth ( $M=-55.90$ ,  $SD=321.56$ ), conditions:  $t(-2.75) = 58$ ,  $p=.008$ . The results indicated that the budget shortfall had an effect on the payroll budget for both high-wealth and low-wealth districts included in the random sample. This also supported the survey and interview findings of the elimination through attrition or freezing of positions in Texas public school districts. Payroll encompasses approximately 80% of a district's total budget. The Texas Education Agency identifies payroll as a function utilized to pay for district salaries and is identified in a district-level budget as belonging to object code 6100 (TEA, 2007).

Other budget functions were nearly statistically significant at an alpha of .05. By analyzing the results of the independent  $t$ -test of the additional budget functions, the data indicated that the instructional administration budget function experienced a reduction in the expenditures from school year 2010-2011 to 2011-2012 for high-wealth school districts ( $M=-\$6.90$ ,  $SD=20.66$ ) and indicated an increase for low-wealth school districts ( $M=\$7.97$ ,  $SD=39.84$ ) conditions:  $t(-1.81) = 58$ ,  $p=.075$ . This function was used for

expenditures that are directly related to the managing, directing, supervising, and providing leadership for staff who provide general or specific instructional services (TEA, 2004).

The budget function for health services (Function 33) was also nearly significant for high-wealth ( $M = -\$8.57$ ,  $SD = 23.15$ ) and low-wealth ( $M = \$.03$ ,  $SD = 9.94$ ) conditions:  $t(-1.87) = 58$ ,  $p = .067$ . The results indicated that high-wealth school districts in the sample decreased their expenditures for this budget function, while the low-wealth school-district sample had a minor increment in their per-pupil allotment for this function. Health services are utilized for expenditures/expenses that are directly and exclusively used for providing physical health services, which are not direct instruction. This function also included activities that provide students with appropriate medical, dental, and nursing services (Brownsville ISD, 2012). Some of the high-wealth school districts have taken the initiative to replace registered nurses with nursing assistants, while others are cutting their hours. Texas does not require a registered nurse in every school, and in an effort to save classroom teachers, some school districts are laying off nurses (McCarten, 2011).

The data results for the sample indicated similarities in the reductions for the budget functions that were not significant. A review of the means in Table 4 of this study indicated that both high-wealth (HWP) and low-wealth property school districts (LWP) in this sample reduced their expenditures in the areas of library services HWP=( $M = -\$20.53$ ,  $SD = 33.05$ ) and LWP=( $M = -\$9.73$ ,  $SD = 47.91$ ), campus administration HWP=( $M = -\$3.73$ ,  $SD = 42.37$ ) and LWP=( $M = -\$32.97$ ,  $SD = 124.12$ ), transportation HWP=( $M = -\$6.27$ ,  $SD = 41.13$ ) and LWP=( $M = -\$2.80$ ,  $SD = 24.84$ ), extracurricular activities HWP=( $M = -\$7.77$ ,  $SD = 34.94$ ) and LWP=( $M = -\$19.37$ ,  $SD = 76.50$ ), general



administration HWP=(M=-\$23.10, SD=36.73) and LWP=(M=-\$3.77, SD=84.94), and maintenance HWP=(M=-\$45.27, SD=130.84) and LWP=(M=-\$50.87, SD=170.03). The analysis of the means of these budget functions indicated that the expenditures for maintenance had the largest reduction in both types of school districts. The results of the data also indicated variances in the per-pupil expenditure means for both school districts.

The variances in the means indicated that the high-wealth property school district increased the expenditures for data processing services (M=-\$8.53, SD=51.26), while the low-wealth sample decreased it (M=-\$.73, SD=39.58). The high-wealth sample increased community services (M=\$.83, SD=11.70), while the low-wealth property school district decreased it (M=-\$2.97, SD=10.31). These were expenditures utilized to fund parental involvement activities (Brownsville ISD, 2012). Other variances included a decrease by the high-wealth property school districts in this sample for staff development (M=-\$23.90, SD=107.37), and an increase by the low-wealth district sample (M=\$1.03, SD=33.79). (M=-\$6.27). This function was used for expenditures or expenses that were directly related and exclusively utilized to aid instructional staff in planning, developing, and evaluating the process of providing learning experiences for students. This function also aided in the development of new or modified instructional methods, techniques, procedures, and services (Brownsville ISD, 2012). Another variance resulted in the budget function for guidance and counseling. The high-wealth district sample decreased expenditures (M=-2.63, SD=57.25), while the low-wealth sample increased it (M=\$7.77, SD=101.43). This function was used for expenditures that were directly and exclusively utilized for assessing and testing students' abilities, aptitudes, and interests. It was related to the counseling of students with respect to career and educational opportunities

(Brownsville ISD, 2012). The last variance occurred in the budget function for social work services. This function was directly related to the expenditures utilized for activities such as investigating and diagnosing student social needs arising out of the home, school, or community (Brownsville ISD, 2012). The high-wealth school-district sample decreased expenditures ( $M=-\$1.30$ ,  $SD=11.96$ ), while the low-wealth sample increased them ( $M=7.97$ ,  $SD=42.80$ ). The results of the variances in the means indicated that the high-wealth school districts had a large decrease in their per-pupil expenditures for staff development but had a large increase in the expenditures for data processing. The low-wealth school district had a small increase in staff development but had a much larger increase in the expenditures for social work services. Table 5 illustrates the means for each function by school-district type.

### **Summary for Research Question 3**

The data indicated a statistical significance in the areas of instruction, security services, and payroll. Additionally, the per-pupil expenditures for instructional administration, health services, and security services were nearly significant at an alpha of .05. Most of the budget functions underwent a reduction in operating expenditures for both types of school districts for the school year 2011-2012. A review of the means also indicated variances in increases and reductions for both types of school districts and a decrease in the per-pupil expenditure means for the 2011-2012 school year as indicated in Appendix C of this study.

The next chapter reviews the key findings for each research question, implications, and conclusions. Additionally, the chapter provides a discussion on the effect that the reduction in operating expenditures had on programs and services for

school year 2011-2012. The chapter also includes the equity implications that came about as a result of the budget shortfall.

## **Chapter 5: Summary, Conclusions, and Recommendations**

### **Introduction**

This study examined budget reductions in high-wealth property school districts and low-wealth property school districts in Texas. The study sought to answer the following research questions:

1. What budget-reduction options are prioritized at the district level for high-wealth property school districts versus low-wealth property school districts?
2. What budget-reduction process was utilized at the district level by high-wealth property school districts and low-wealth property school districts?
3. What district-level budget functions were slated for reduction at high-wealth property and low-wealth property school districts and what are the equity implications that surfaced as a result of the reductions?

### **Summary of Key Findings**

The first research question was answered utilizing a 5-point Likert-scale survey that dealt with the prioritization of strategies utilized during the budget-reduction process. Through descriptive statistics, the researcher analyzed the data results to determine the options that are prioritized by school-district superintendents, chief financial officers, and school board members of a high-wealth property school district and low-wealth property school districts. The key findings for the first research question are included in detail in the next section.

#### **Key Findings for Research Question 1**

The results of the survey indicated that school-district leaders at both high-property and low-wealth property school districts prioritize various options when undergoing the

budget-reduction process. School-district leaders believed that developing a clear organization's vision for the budget-reduction and development process was a high priority. The vision drives the goals of the district budget and the goals were tied to the designated expenditures. The goals were communicated to all stakeholders as well as the budget problem. School leaders and board members ensured that the focus was on the challenge to create a budget that was aligned to the academic goals of the district. Throughout the process, school leaders and board members ensured that stakeholders were not only informed but understood and participated in the process. Additionally, equally rated as a high priority, was keeping the school board informed throughout the entire process. A clear understanding of the criteria prior to the developing of the solutions was prioritized as well as ensuring transparency throughout the process so that the community and school board had a clear understanding of why certain decisions had to be made: decisions that might involve the reduction of expenditures in certain functions, suspension or elimination of capital projects and closing of personnel units.

The survey was the first part in the qualitative section of the study and sought to examine the prioritization of budget strategies when faced with a reduction in operating expenditures. The second research question was answered utilizing a semi-structured interview. The interview examined the budget-reduction process utilized by the superintendents, chief financial officers, and school board members of a high-wealth property school district and a low-wealth property school district. The same respondents and school districts were utilized, along with the semi-structured interview.

## **Key Findings for Research Question 2**

The results of the semi-structured interviews revealed that school-district leaders in both high-wealth property and low-wealth property districts utilized various key factors in the budget-reduction process. One key factor that was evident with both types of school districts was ensuring that various budget reports were presented on the district budget, at each regularly scheduled board meeting or at budget meetings. Butler (2011) recommended that school leaders present reports, such as a five-year trend line on the general fund's balance, five-year trend line on district revenue and expenditures, and a four-year budget forecast. The author suggests that presenting financial reports to the board is an essential tool that should be utilized by school leaders. In this study, school leaders discussed the utilization of budget reports, but the reports mainly included the operating expenditure encumbrances and balance reports from the previous school year. These reports were utilized to create the various budget scenarios that were presented to the school board and the community at board and budget meetings.

District leaders discussed the need to present various budget-reduction scenarios to the school board so that collaboration among the stakeholders, community, district personnel, and school board members could take place. The scenarios included a draft of what the school-district budget would look like for the 2011-2012 school year that included a number of budgetary reductions. These scenarios were eventually presented to the school board and community. The scenarios were a form of transparency, which was also discussed by most of the respondents as a very important part of the process. Additionally, prior to undergoing the process, the district leadership of both the high-wealth and low-wealth school districts wanted to ensure that all stakeholders had a

thorough understanding of the budget crisis. It was important for the district leadership to clarify to the stakeholders why certain reductions had to be made. Furthermore, discussions were held with program administrators and campus principals who had to justify every program and expenditure for the 2012-2013 school year. The program and campus leaders had to back up their needs with assessment data and their respective needs assessment.

The results also indicated a need by respondents to explain to the community the impact that the budget reduction would have on personnel, especially teaching positions. The respondents felt a very important part of the process included the closing of personnel units through attrition, the analysis of the district budget, line-item by line-item, and the careful analysis of staffing ratios so as to ensure equity. The superintendents also stressed that a critical factor in the process is ensuring that the school board members trust in the district leadership, especially in the superintendent, to make critical decisions that will not endanger the overall instructional program.

The examination of the prioritization and process of the high-wealth and low-wealth school district qualitative sample revealed similarities with respect to how the school districts handled the financial crisis. The respondents of both school districts firmly believed in the process that was utilized to decide on the reductions in their respective districts. They discussed the need to be open and transparent with the community and district staff. The superintendents talked about the need to ensure the staff that jobs would not be lost but that critical decisions would have to be made by top administration on the positions that would not exist for the 2012-2013 school year. The respondents felt it was not enough to have personnel justify each expenditure and

position requested. Both superintendents felt it was important to be completely involved in the entire budget process, whereas in the past, the chief financial officers were left the task of developing projections and presenting them to the respective department or campus administrators.

However, there were some differences in the method by which these budget meetings were held by both school districts. The high-wealth district respondents, especially the chief financial officer and superintendent, provided input on expenditure decisions that were taking place at both district departments and campuses, unlike the low-wealth school district leadership that left the decision-making up to the department or campus leaders but ensured that they stayed within the parameters of the district procurement procedures.

The method by which the districts made the budgetary reductions for the 2012-2013 school year also proved to be different. The high-wealth school district respondents discussed the across-the-board 10% reduction that took place for all campus and department-level budgets. The chief financial officer stated that for the 2013-2014 school year, the district was going to cut the budgets utilizing the same 10% reduction. This was not the case for the low-wealth school district. The chief financial officer felt it was imperative to maintain a healthy fund balance and continue to be as frugal as possible because in the past, the district had faced financial exigency. The superintendent and CFO did not want the district to be faced with a financial crisis because of the reduction in state aid. The district takes back all funds that are unspent by the various departments and campuses. They also reduce the budget allotment for the next year if they determine the campus or district was not spending the money wisely.



Although the districts have different wealth designations, the population for the districts was very similar. The new accountability standards and reduction in state aid affected the method by which districts designated budgetary allotments for the 2011-2012 school year. Both districts discussed the need to ensure students experience academic success and both were concerned about the new assessments. For the low-wealth school district, this was critical. The district chose to add new positions in the area of instructional administration so that these administrators would assist the campuses in preparing for the more rigorous assessments. This was also evident in the high-wealth district. The superintendent discussed the need to analyze staffing formulas with an emphasis on keeping more teachers in the lower grades, especially for classes with high LEP populations.

Additionally, the results of the survey and semi-structured interviews revealed that both school districts modified the methods by which decisions are made when deciding on the allocation of resources. It forced the districts to examine expenditures and to ensure that these expenditures were aligned to the needs of the district, especially those that are designated for the overall instructional program.

### **Key Findings for Research Question 3**

The third and final research question was utilized for the quantitative section of the study. To increase the validity of the findings, the data collection was expanded to a random sample of 60 school districts in Texas, 30 high-wealth and 30 low-wealth by property. In order to determine statistical significance, the independent samples *t*-test was utilized as the statistical method for this study. The researcher obtained the per-pupil expenditure for 15 budget functions that are part of a district's adopted budget through

the TEA PEIMS Financial Reporting System, found on the TEA website. The school years utilized were 2010-2011 and 2011-2012.

The random sample (n=60) of the high-property and low-wealth property district-level budgets indicated statistical significance at a confidence interval of .05 for the budgetary functions of instruction, security services, and payroll. The data results also yielded nearly statistical significant *t* scores for the budgetary functions of instructional administration, and health services. Lastly, the data revealed variances in the increases and decreases to the additional budget functions for the random sample in this study.

The high-wealth property school-district sample underwent reductions to the majority of functions for the school year 2011-2012 with the exception of data processing and community services. The low-wealth property school district also experienced reductions in the majority of the budget functions and increased staff development, instructional administration, guidance and counseling, social services, health services, and security services. The examination of the per-pupil expenditures for the school year 2011-2012 revealed that the largest budget reduction was made to the area of instruction and payroll functions for both types of school districts.

The instruction budget expenditures are utilized by school districts to pay for items directly related to classroom use. School districts across Texas had significant reductions in their instructional expenditures. One high-wealth district reduced the campus budget allocations for instruction and chose to supplement this expenditure with a public-private partnership (Orr, 2011). However, many low-wealth districts cannot count on these types of partnerships and instead are forced to reduce the operating expenditures provided to campuses. One district located in the Rio Grande Valley chose

to reduce the capital outlay budgets for all of their campuses. The schools had to forgo new expenditures for classroom computers (Brownsville ISD, 2012).

The instructional expenditures are some of the largest expenses for school districts. Teachers are a very important piece of the overall instructional program, and the shortfall caused a reduction to critical positions such as classroom teachers. Although payroll is separate and apart from the instructional expenditures, the researcher included this expenditure because of the impact of the budget shortfall on staffing.

The budget cuts that occurred during the 2010-2011 school year have affected all of the state's 1,200 plus school districts, regardless of whether they are high-wealth or low-wealth property school districts. This was very evident in the area of instructional positions. There are fewer teachers in classrooms today, just under 11,000, which indicated a 3.2% decrease (Smith, 2012). In an effort to save money, the districts either froze positions or salaries. The shortfall had an effect on raises for the 2011-2012 school year. One of the low-wealth property school districts included in this study chose to impose a one-year salary freeze to the teacher salary schedule in order to save teaching positions (Harlingen CISD, 2011). However for one of the high-wealth school districts included in the sample, the reduction was in the upwards of \$58 million for employment of teachers and instructional supplies (Houston ISD, 2011). In another high-wealth school district, the cuts were made to stipends for teachers and a reduction of the campus-planning period at the secondary level in order to decrease the number of teaching vacancies (PegNews, 2011). The decrease in teaching vacancies had an effect on programs and services, especially for students identified as economically disadvantaged.

Districts that have a high number of economically disadvantaged students tend to spend more on the instructional and general administration portion of their budget. A report of the cost analysis for public school-district payroll expenditure budgets indicated that public schools that reported over 80% of their students as economically disadvantaged spent 60.6% of their budget on instruction and 20.8% on the general administration operations budget (Moak & Casey, 2011). The reduction in revenue had school districts with a high percentage of economically disadvantaged students, struggling to figure out ways to maintain the percentage allotted to the school-district payroll.

Although the percentage of economically disadvantaged students is increasing, the results of the statistical data indicated that school districts, whether high-wealth or low-wealth, dramatically decreased their expenditures for payroll. Many school districts closed positions through attrition, which ultimately resulted in an increase in areas such as student-teacher ratio. The state made it easier for districts to apply and be granted a class-size waiver in the lower grades and the amount of school districts that have submitted a waiver has risen (Smith, 2012). The Texas Education agency reported that for the 2011-2012 school year, the number of elementary classes exceeding the 22-student cap increased from 2,238 to 8,479 (TEA, 2012). Research is mixed on the effect of class size on learning, but many educators agree that just increasing the class size by two students becomes a challenge (Smith, 2012).

The decrease in the number of teaching positions meant that teachers would have an increase in duties and number of students in the classroom. Dallas ISD, in a press release to the community, announced that they would be eliminating the campus-planning

period at secondary schools for the 2011-2012 school year. Additionally, the student-teacher ratios went up in the Dallas schools. For example, at the high school level, the ratio increased from 25:1 to 26:1 and at the sixth grade, the ratio increased from 23:1 to 25:1 per teacher (Dallas ISD, 2011). Programs and services were closely examined for cost-effectiveness by many school districts as they were planning the budget. This meant that all educational programs had to be evaluated for its effectiveness and need. However, some of the programs that were eliminated were used to assist those students with the greatest need. In Summerfield ISD, the district decided to disband the elementary and junior high ESL pull-out program. The district decided it could continue to offer services through their regular education program. According to the superintendent, many of the teachers hold ESL certifications so they did not need the pull-out program (Gooch, 2012). A reduction in funding for ESL programs and materials will only serve to widen the educational gap in minority students. It is predicted that for the 2012-2013 school year, districts in the Rio Grande Valley will experience a reduction of about \$182 million dollars. The Rio Grande Valley serves a very large number of Limited English Proficient (LEP) students who count on these ESL services and materials in order to be successful (La Fe PREC, 2011).

Other programs that experienced a reduction for the 2011-2012 school year and will be reduced further for the 2012-2013 school year are after-school tutorials and intervention programs for at-risk students (Gooch, 2012). These reductions have dramatically reduced the number of intervention programs and teaching positions aimed at assisting the students with the greatest need. In Houston ISD, a decision was made to reduce the maintenance of effort funding for special education by approximately \$15

million for the 2011-2012 school year (Houston ISD, 2010). The reduction in expenditures for special programs brings to light the issue of equitable and adequate resource allocation for all student populations, especially the early-childhood programs.

School districts also lost discretionary funding for the 2011-2012 school year. Budget reductions came in the form of the elimination of grants from the state to fund full-day pre-kindergarten programs. The Pre-K program assists students who are low-income, Limited English Proficient (LEP), kids in foster care, or whose parents are on active-duty military or injured or killed on duty. Many school districts that could not pay to fund the full-day program reverted back to a half-day. In total, schools cut 1,132 pre-kindergarten positions by limiting enrollment and by reverting to a half-day program. Cypress-Fairbanks ISD kept its full-day program, while El Paso ISD cut their Pre-K teachers by almost 93% (Michels, 2012). The budget cuts also affected other critical instructional programs such as those spent on school libraries. Library services are considered part of the instructional services in schools. Libraries are generally kept open after-school hours, especially when schools are conducting enrichment or tutorial programs. The library services expenditures were reduced for the 2011-2012 school year, for both types of school districts. Some of the school districts included in this study made the decision to reduce the number of librarians in their schools. Reducing the expenditures for libraries hurts the overall instructional program. School districts need to close the achievement gap between all subgroups and need students exposed to reading as much as possible so that all students, regardless of race or socio-economic status, become proficient readers (Ballinger, 2011).

The instructional program and services in school districts are an integral part of the overall organization. The instructional program and services encompasses the payroll allotted to fund positions, such as classroom teachers and instructional administrators. The school districts utilized in the survey and semi-structured interview discussed the need to ensure programs and services aimed at assisting students, such as at-risk and ESL, were not eliminated. Both school districts also discussed the need to eliminate positions through attrition, while maintaining as many classroom positions as possible. However, the low-wealth district did not close positions for the 2011-2012 school year, unlike the high-wealth district that closed 11 positions. The district advertised for a curriculum supervisor because of the need to improve academic performance. The district also hired several new teachers to assist in the lower grades. The high-wealth district, however, closed classroom positions because of the need to balance the district budget. This supports the results of the mean change by per-pupil expenditure (Table 5).

The results indicated both school districts underwent reductions to the payroll budget function; however, the high-wealth school district had a significant reduction as opposed to the low-wealth school district sample. The hiring of the curriculum supervisor by the low-wealth school district also supported the result of the mean change for the budget function of instructional administration. The mean change indicated that the high-wealth school district reduced this function, while the low-wealth school district increased it. Both school districts indicated the need to ensure the preserving of programs and services, paid through the instruction and payroll function, to assist students such as those identified as special needs and low-socioeconomic.

The Rio Grande Valley serves many children who are identified as low socio-economic. Many parents in the Rio Grande Valley count on the services provided by the school nurses. Although the services are diminishing, many school districts continue to employ campus-based nurses but are looking at creative ways to fund this expenditure. An examination of the results indicated that the high-wealth property school districts reduced their expenditures for this function. A high-wealth property school district chose to restructure the RN/LVN model for their campuses. RN's were replaced with LVN's. The LVN's were clustered in groups of five, supervised by an RN (Round Rock ISD, 2011). One low-wealth property school district chose to replace RN's with LVN's, in order to save money and increased the expenditures by very small increment to the per-pupil expenditures (Bigger-Cantu, 2011).

Other service-oriented functions such as security services yielded a reduction for high-wealth school districts and an increase for the low-wealth. One of the school districts identified as low-wealth in this study, had debated the reduction of security services for the district. This low-wealth school district, however, chose to increase these services and purchase items such as metal detectors to be utilized at every middle school and high school (Morton, 2011). A high-wealth district chose to reduce the overtime pay for security, while overseeing athletic events. The district began to utilize a modified work schedule in order to prevent the overtime cost. One of the larger high-wealth property school district chose to reduce the security to half-time and to utilize 911 for emergencies, in the absence of campus security (Smith, 2012).

Another service-type function that was reduced by the low-wealth school districts and given a very small increment by the high-wealth school districts was the community



services expenditures. This function is used for expenditures that are directly used for activities in assisting students and their families such as obtaining assistance from social agencies. A school district in Texas eliminated a program that assisted at-risk students with programs and activities to prevent them from dropping out which had shown to have been very successful (Moriak, 2011).

Although campus administration is not necessarily a service-type function, school administration is in charge of the overall program of a campus. The data results showed that low-wealth property school districts dramatically reduced their per-pupil expenditures in this function. The reduction of personnel occurred in the area of campus administration. Campus administration refers to the leadership in schools such as principals, assistant principals, and other assistants who supervise the operation of a campus. Some of the districts in the study chose to close campuses in order to save money, and by closing these campuses, they were able to eliminate campus administration positions through attrition (Smith, 2012). Closing of campuses was a very hot topic during the adoption of the 2011-2012 school-district budgets that only highlighted the issue of equitable access for all students.

The budget shortfall caused a \$4 billion reduction in state aid to all public school districts, beginning in the 2011-2012 school year. The shortfall caused many school districts to re-examine the way they allocate funds for the overall instructional program and brought to the surface the inequities in the way school districts are funded. For example, the district of El Paso was shorted about \$66 million for school year 2012 and will be shorted approximately \$47 million in 2013. The El Paso school district responded by eliminating 116 positions and decreasing programs such as gifted and talented, fine

arts, and athletics. Some of the positions eliminated included at-risk coordinators and librarians. Although the state legislature requires fine-arts as part of the graduation plan, the district has chosen to decrease it because of the cuts. The reductions in operating expenditures will continue well into the biennium. The additional budget cuts in 2013 will lead the district to further reduce their operating expenditures, affecting programs and services, especially for those students who need it the most (Ballinger, 2011).

The budget reductions that have caused low-wealth property school districts like El Paso to eliminate a high number of positions highlight the inequities that exist with the Texas school finance system. Less than one-third of districts in Texas are funded with the equalization formulas in Chapter 42 of the Texas Education Code, while the rest are funded with revenue targets (Clark & Lain, 2010). The Target Revenue System has not been adjusted for changing requirements or inflation. This lack in adjustment has caused some school districts to be at a funding disadvantage and some districts at a comparative advantage in subsequent school years. The variations in funding are often incompatible to the district resource needs. Although the foundation formulas were intended to ensure equity, the resource levels in Tier 1 are based primarily on target funding, not the foundation program calculations, and in turn, equity is compromised. For example, the range of revenue targets for school year 2010 ranged from \$3,900 per student to more than \$13,000 per student. The variations in target seldom relate to the educational needs of students, presenting both equity and adequacy problems. The Texas Legislature can adjust for inflation but inequities continue to exist, especially in low-wealth property school districts (Clark & Lain, 2010). The shortfall has only made the inequities even larger as school districts prepare to adopt their 2012-2013 district budgets. The shortfall

not only affected the allocation of resources to the instructional program, it also forced school districts to make some very hard decisions to either eliminate or cut programs and services that were aimed at assisting students, such as those identified at-risk, low-socioeconomic, and limited English proficient.

### **Implications**

The method by which Texas finances public schools will continue to have an impact on the process utilized by school districts to make budgetary decisions, especially in times of financial crisis. The examination of the budget reductions in high-wealth and low-wealth property school districts brought to light several implications. First, school districts must ensure transparency and communication of the budget problem with all stakeholders and especially with the school board. It is not enough to just bring a prepared budget plan for approval without ensuring that there is a thorough understanding of the budget crisis and the method by which the school district has chosen to address it. Second, school districts must utilize a process that is firmly grounded in the mission, vision, and goals of the school district. The respondents in this study discussed the review of each line-item and the usage of financial reports, but most of the reports utilized were expenditure reports or staffing ratio reports from the previous year. Butler (2011) recommended the usage of a five-year trend line, which provides a report on total district revenue and total district expenditures. This report will provide the district leaders and board members with direction, focus analyses, and discussion on district budget priorities. Third, school districts should closely examine the budget reductions to operating expenditures and ensure that it allocates resources appropriately, prioritizing expenditures for the students who need it the most.

## **Conclusions**

The budget shortfall that led to the massive reductions felt by many school districts in Texas during the 2011-2012 school year, will more than likely carry-over into the next biennium. This study examined the budgetary reductions at both high-wealth and low-wealth property school districts. The analysis of the data indicated that the \$4 billion budget shortfall caused a reduction in most of the operating expenditures for both types of school districts. The school leaders and board members discussed the need to ensure all stakeholders were familiar with the budget process so as to ensure buy-in and support when reductions had to be made. Lastly, the study sought to highlight the inequities that surfaced as a result of the budget reductions that affected the per-pupil expenditure for the majority of the budget functions included in a district-level budget.

Several studies have sought to examine fiscal crisis and its effects on public school funding. A study by Miles and Roza (2006) on student-weighted allocation provided evidence that increasing the allocation of funding for programs such as special education and vocational education can be a means towards greater resource equity among school districts. Similarly, a study by Jones and Slate (2010) supported the findings Miles and Roza (2006) but expanded it to include the recommendation that school districts should allocate more money for instruction and less in areas such as transportation. A study conducted by Vasquez-Heilig et al. (2010) indicated the need to increase operational and instructional expenditures in order to raise academic achievement and highlighted the need to study not only what money is spent, but also how the money is spent in school districts.

The importance of ensuring equity and adequate allocation of resources in order to ensure academic achievement were highlighted in the above studies; however, these studies also highlighted the fact that increasing resources will not always ensure higher quality and more focus should be made on how the money is spent. Through the process of budgeting, school districts can determine how money is spent and make decisions after a thorough examination of data sources and with the assistance of key stakeholders.

The collaboration of stakeholders leads to openness in the budget-building process. A study by Bird et al. (2009) determined that superintendents tend to be more open about the budget-building process with their stakeholders when their per-pupil expenditure levels are at the state average unlike superintendents whose district-level budget is below state average. Stakeholder participation was the subject of a qualitative study conducted by Ebdon and Franklin (2004). The results of the study indicated that participation of citizens should occur early in the budget process in order to instill upon the stakeholders. The need for stakeholder involvement was frequently mentioned by the respondents in both the survey and interview. There is a need to involve stakeholders in the budget-reduction process. Involvement in the process will influence motivation to achieve the goals of the budget.

Stakeholder participation and understanding how the money is spent is important to achieving the goals of the budget. However, does this matter when school districts are faced with a budget crisis? Studies have been conducted on cost-cutting methods in reaction to budgetary crisis. Bolen (2009), in a study on efficient cost-cutting methods for public schools, indicated that a careful examination of expenditures such as the cost of health insurance and a decrease in positions that are not vital can lead to increased

revenue for school districts. Additionally, a study conducted by DeVore (2009) examined the process utilized by school-district superintendents to determine budget cuts. The study determined that superintendents must ensure stakeholders have a clear understanding of criteria to be utilized when making budget cuts and the importance of keeping the school board informed of the budget crisis. This also lends support to the findings of this study, which highlighted the importance of maintaining a strong focus on communication with the school board.

School board and stakeholder collaboration is critical, especially when faced with a financial crisis. A study conducted by Doherty and Fenwick (1982) indicated the need to develop a rationale for budget reductions and supports the findings from the survey and semi-structured interview included in this study. Some of these include: (a) reductions should be made that are based on principles that make clear the basis for all decisions by the school board; (b) multiple opportunities should be provided for citizen and community input; (c) principals and department heads should recommend budget cuts that are done in collaboration with district decisions; and (d) goals for each function should be developed as they become invaluable pieces of information for the people involved in the budget process. The results from this study support prior research on the budget-reduction process and indicate a need to make decisions that will not affect the instructional program, especially programs and services for high-need students. School districts should base the reductions on the needs of the students as highlighted by the conceptual framework utilized in this study.

The study highlighted the need to ensure equitable distribution of resources for all programs and services in both types of school districts. The need to ensure equity by the

respondents in this study is aligned to the conceptual framework utilized in this study. The conceptual framework by Berne and Stiefel (1984) addressed three components: (a) targets of equity, (b) objects of equity, and (c) principles of equity. The concept of equity in this framework calls for providing the necessary resources, support programs, and equal treatment in order to ensure similar results among all subgroups. The framework supports the focus of this study, which calls for an examination of how district leadership make decisions on financial inputs to ensure the outputs, academic achievement. The vision of the school district is imperative when decisions are being made with respect to the elimination or reduction of programs and services. This was evident in the survey results and interview comments from the respondents of both types of school districts.

The high-wealth school district interview respondents indicated that the district leadership and school board examined staffing formulas and evaluated programs and services in order to identify the critical areas of need for the district. The high-wealth district has a procurement practice that encompasses justification of all programs purchased by district-level and campus-level personnel. These programs must be aligned to the goals of the district, and many of these goals target their at-risk, low-socioeconomic, special education, and bilingual populations. Similarly, the low-wealth school district holds budget meetings with all department and campus-level administration, prior to the adoption of the new budget, so that each administrator presents the needs of his/her perspective campus or department and justifies each expenditure in his/her projected budgets according to student need.

The Texas school finance system adjusts funding according to need as evidenced by the various tier funding levels (TEA, 2011). This is an attempt by the state to ensure

vertical equity. However, the budget reductions that have occurred as a result of the 2010-2011 shortfall will only make vertical equity harder to achieve. Vertical equity attempts to identify the various characteristics of students who require more funding. Typically, these characteristics include measures of student poverty status in the community, presuming the students located in a lower socioeconomic area need more funding than their wealthier counterparts to provide the same basic level of education (Toutkoushian & Michael, 2007). The impact of the budget reductions on the achievement of vertical equity will need to be examined by both types of school districts as they develop the budgets for the 2012-2013 school year.

The budget reductions impacted the academic achievement of students, especially students who are struggling to close the achievement gap. This study attempted to identify the process that the high-wealth and low-wealth school districts utilized to prioritize budget reductions and the various functions that were either decreased or increased in an attempt to achieve not only horizontal equity but most importantly, vertical equity. The findings from the qualitative section of the study assisted the researcher in formulating conclusions on the allocation of resources by the two sample districts, as well as their attempt in ensuring both equitable and adequate distribution of resources occurred during the 2011-2012 school year.

The researcher can conclude from the results of the 5-point Likert-scale survey that both types of school districts kept the vision in mind when prioritizing budget cuts at the district level. Both school districts believed a high priority was the communication of the budget crisis to all stakeholders and the stakeholders' involvement in the budget-reduction process. Communication with the school board and stakeholders was also



deemed a priority because of the need to inform the community on the various reductions affecting the school district. Some of the hindrances reported by respondents as they underwent the budget-reduction process were the uncertainty of the financial shortfall as they moved to adopt the 2011-2012 school-district budget and the various scenarios that had to be created as a result of this uncertainty.

One can also conclude from the results of the semi-structured interviews that the respondents believed transparency of the budget process was very important as they underwent the budget-reduction and adoption process. The respondents also believed that communication of the budget problem was very important to the process; all stakeholders understood the reasoning behind the cuts being made. Additionally, the respondents for both types of school districts spoke about the importance of ensuring that the district employees understood no one would lose their job. Both school districts chose to close positions through attrition rather than having to implement a reduction in force. Both the Rio Grande ISD and the Texas ISD utilized a process that allowed for a close examination of the budget crisis, a development of various scenarios that did not include letting go of employees, and an adoption of a budget, firmly grounded in the vision of the school district and its stakeholders.

The statistical analysis of the budget-reduction process revealed that both types of school districts underwent budget reduction in their operating expenditures, as evidenced by the decrease in per-pupil expenditure for the various budget functions. These budget reductions had an effect on the expenditures that are utilized to fund the instructional programs and services of a school district. The results of the *t*-test indicated that both types of school districts decreased their expenditures for instruction. The decreases were

also evident in payroll for the high-wealth and low-wealth school district sample. The reduction to the payroll budget function was evident in the number of positions that were either frozen or eliminated by both types of school districts for the 2011-2012 school year. The per-pupil expenditure reductions for the various budgetary functions placed in danger the elimination of programs and services aimed at assisting students with the highest need. The findings from this mixed-methods study highlighted some recommendations for future research.

### **Recommendations for Future Research**

This study consisted of an examination of budget reductions at high-wealth property and low-wealth property school districts in Texas, conducted through a survey and semi-structured interview and expanded to include a statistical analysis of a random sample (n=60) of school districts. The sample that included 30 high-wealth and 30 low-wealth school districts was also utilized to examine the inequities caused by the budget shortfall to fund public schools in Texas. From the findings of this study, pertinent recommendations for practice and future research were found. In order to generalize the findings, further research could be conducted by utilizing this research design and methodology but with other districts that are similar contexts, differ in enrollment, and expanding the sample size for the quantitative section of the study. The significant reductions in the functions for payroll and instruction should be examined in order to determine what types of programs and services were identified for reduction by high-wealth and low-wealth property school districts as well as identifying the types of positions that were eliminated. Future research could also be conducted through the application of this study's research design and methodology, but it should be expanded to

include campus-level budgets for both high-wealth property and low-wealth property school districts. The study examined the budgets for two school years but could be expanded by conducting a longitudinal study of the budgetary reductions and examining the impact on equity and allocation of resources.

### **Summary**

The budget shortfall triggered a reduction of over \$4 billion of state aid to public schools in Texas. This, in turn, had an impact on the district-level operating expenditures for both high-wealth property and low-wealth property school districts in Texas. The shortfall caused an elimination of programs and services, such as at-risk programs, Pre-K programs, and merit pay for teachers. It is estimated that public school funding will face further cuts through the biennium (Cavanagh, 2011).

The budgetary shortfall that reduced the funding to Texas public schools has not only affected the monetary allocation for public schools, it also had an impact on the process utilized by school districts to make budget decisions. School districts across Texas are bracing for more cuts and the impact has been the number of lawsuits filed by both high-wealth and low-wealth property school districts against the way school districts are funding. This study brought to light not only the amount of reductions that occurred, but also highlighted the inequities that emanate from the political choices made in Austin regarding educational funding in Texas.

Table 1 District Demographics

School District	Type	Enrollment	Number of Personnel	Total Revenue (Federal, State, Local)
Rio Grande ISD	Ch 42	2,265	350	\$21,000,000
Texas ISD	Ch 41	2,532	380	\$29,000,000

\*Data retrieved from the Texas Education Agency (2011).

Table 2. Likert-Scale and Semi-Structured Interview Respondents

School District	Superintendent	Chief Financial Officer	School Board Member	Total
Rio Grande ISD	1	1	1	3
Texas ISD	1	1	1	3
Total	2	2	2	6

Table 3. Responses Regarding the Prioritization of Budget Reductions in the Budget Development Process

Priority Question	Low Priority			Very High Priority	
	1	2	3	4	5
1. Development of a clear organization's vision...	0	0	0	16.7	83.3
2. Establish norms for all decision teams & groups/stakeholders...	0	0	0	66.7	33.3
3. Communicate a clear Understanding of the budget problem to all groups/stakeholders...	0	0	0	0	100.0

Table 3 (continued)

Priority Question	Low Priority			Very High Priority	
	1	2	3	4	5
4. Focus on the budget-reduction problem an opportunity or challenge...	0	0	0	33.3	66.7
5. Keep stakeholders Informed during the entire process...	0	0	0	0	100.0
6. Develop a clear Understanding of the criteria prior to developing the solutions.	0	0	0	0	100.0
7. Involve decision team in generating and prioritizing possible solution criteria.	0	0	0	33.3	66.7
8. Encourage creative brainstorming to generate possible solutions...	0	0	0	83.3	16.7
9. Clarify the decision-Making process to all groups/stakeholders...	0	0	0	16.7	83.3
10. Work for consensus...	0	0	16.7	66.7	16.7
11. Involve a cross section of all stakeholders...	0	0	0	50.0	50.0
12. Data sources including enrollment figures, demographics, special population percentages, and programs, and services are provided to all decision-makers during the process...	0	0	0	16.7	83.3

Table 3 (continued)

Priority Question	Low Priority			Very High Priority	
	1	2	3	4	5
13. Allocation of resources that ensure equity is a major focus in the process...	0	0	0	50.0	50.0%
14. Keep the board informed of each step...	0	0	0	0	100.0%
15. Establish a collaborative relationship with teacher organizations prior to the onset of budget crisis...	0	0	33.3	33.3	33.3%

Table 4. Results of Independent *t*-test: Budget Functions – Mean Change

Budget Function	Levene's test for Equality of Variances		<i>t</i> -test for Equality of Means			Mean Dif.
	F	Sig.	<i>t</i>	<i>df</i>	Sig.	
Instruction	.121	.729	-2.943	58	.005*	-217.67
Library Services	.111	.740	-1.016	58	.314	-10.80
Staff Development	.749	.390	-1.210	58	.230	-24.93
Instructional Adm.	3.490	.067	-1.810	58	.075	-14.87
Campus Adm.	5.190	.026	1.220	58	.227	29.23
Guidance & Counseling	.363	.549	-4.890	58	.627	-10.40
Social Services	3.720	.059	-1.140	58	.258	-9.27
Health Services	4.170	.046	-1.870	58	.067	-8.60
Transportation	2.250	.139	-3.950	58	.694	-3.47
Extracurricular	1.400	.242	.755	58	.453	11.60
General Admin.	.713	.402	-1.140	58	.257	-19.33
Maintenance	.091	.764	.143	58	.887	39.17
Security Services	.366	.548	-2.100	58	.040*	-9.20
Data Processing	3.740	.058	.784	58	.436	11.82
Community Services	.539	.466	1.340	58	.187	-3.80
Payroll	.000	.991	-2.750	58	.008*	-243.83

\*Indicates significance at the .05% confidence interval.

Table 4.1 Results of Independent *t*-test: Budget Functions-Per-pupil Expenditures-School Year 2010-2011

Budget Function	Levene's test for Equality of Variances		<i>t</i>	<i>t</i> -test for Equality of Means		Mean Dif.
	F	Sig.		<i>df</i>	Sig.	
Instruction	3.005	.088	3.398	58	.001*	697.11
Library Services	2.594	.113	.931	58	.356	86.20
Staff Development	1.055	.309	1.931	58	.058	25.88
Instructional Adm..	.219	.642	.231	58	.818	4.24
Campus Adm.	.001	.971	.343	58	.733	8.03
Counseling	.012	.914	.672	58	.504	12.97
Social Services	2.731	.104	-1.662	58	.102	-8.19
Health Services	1.781	.187	.812	58	.420	8.04
Transportation	2.503	.119	1.568	58	.122	143.73
Extracurricular	3.534	.065	.066	58	.947	3.85
General Admin.	1.023	.316	.188	58	.852	12.83
Maintenance	4.041	.049	.461	58	.646	61.93
Security Services	.326	.570	-1.542	58	.129	-17.77
Data Processing	6.145	.016	-3.426	58	.001*	-55.29
Community Services	10.508	.002	1.605	58	.114	19.11
Payroll	1.459	.232	1.355	58	.181	459.97

\*Indicates significance at the .05% confidence interval.



Table 4.2. Results of Independent *t*-test: Budget Functions-Per-pupil Expenditures-School Year 2011-2012

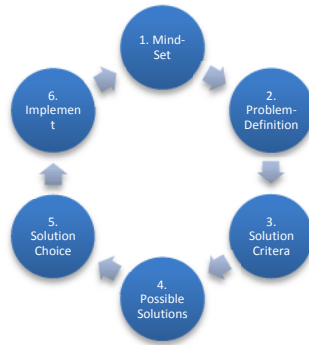
Budget Function	Levene's test for Equality of Variances		<i>t</i>	<i>t</i> -test for Equality of Means		Mean Dif.
	F	Sig.		<i>df</i>	Sig.	
Instruction	1.708	.196	2.112	58	.039*	467.90
Library Services	1.155	.287	-1.093	58	.279	-9.97
Staff Development	2.760	.102	1.508	58	.137	19.17
Instructional Adm..	.047	.829	-3.37	58	.737	-5.63
Campus Adm.	1.375	.246	1.198	58	.236	29.97
Counseling	.369	.546	.282	58	.779	6.03
Social Services	4.347	.041	-2.135	58	.037*	-17.20
Health Services	.486	.488	.437	58	.664	4.70
Transportation	2.259	.117	1.388	58	.171	66.63
Extracurricular	2.47	.122	.287	58	.775	17.70
General Admin.	.611	.438	.064	58	.949	4.23
Maintenance	2.912	.093	.739	58	.463	113.10
Security Services	1.308	.257	-2.570	58	.013*	-29.97
Data Processing	.516	.476	2.635	58	.259	14.33
Community Services	5.057	.028	1.140	58	.259	14.33
Payroll	1.725	.194	1.536	58	.130	515.87

\*Indicates significance at the .05% confidence interval.

Table 5. Means for the Per-Pupil Expenditure Change by Function: School Year 2010-2011 to 2011-2012

Function	District Type	Mean
Instruction	HWP	-\$241.87
	LWP	-\$24.20
Library Services	HWP	-\$20.53
	LWP	-\$ 9.73
Staff Development	HWP	-\$23.90
	LWP	\$1.03
Instructional Administration	HWP	-\$6.90
	LWP	\$7.97
Campus Administration	HWP	-\$3.73
	LWP	-\$32.97
Guidance & Counseling	HWP	-\$2.63
	LWP	\$7.77
Social Services	HWP	-\$1.30
	LWP	\$7.97
Health Services	HWP	-\$8.57
	LWP	\$.33
Transportation	HWP	-\$6.27
	LWP	-\$2.80
Extracurricular	HWP	-\$7.77
	LWP	-\$19.37
General Administration	HWP	-\$23.10
	LPW	-\$3.77
Maintenance	HWP	-\$45.27
	LWP	-\$50.87
Security Services	HWP	-\$5.17
	LWP	\$4.03
Data Processing	HWP	\$8.53
	LWP	-\$ .73
Community Services	HWP	\$.83
	LWP	-\$2.97
Payroll	HWP	-\$299.73
	LWP	-\$55.90

Figure 1. Six-Step Problem-Solving Model



## Appendix A

### Public School-District Budget-Reduction Survey

When you are faced with reducing operating expenditures what strategies do you consider as priorities during the budget-reduction process? Please begin by responding to Section I (1-5) in order to garner some information on the school district you currently serve as (\_\_\_\_\_). For section II (6-20), utilize the five point rating scale from Low Priority to High Priority. Section III (21-22), please indicate any “other” important strategies or “hindrances” you experienced throughout the budget-reduction process.

**Section I-**

1. Gender      A. Male                      B. Female
  
2. Years as a Superintendent in the district:
  - A. 0-5              B. 6-11              C. 12-17              D. 18-or more
  
3. Overall experience as a superintendent (in years):
  - A. 0-5              B. 6-11              C. 12-17              D. 18-or more
  
4. Number of Employees in the school district:
  
5. Scale of School-District Budget (In Millions)

**Section II**

Strategy	Low Priority		High Priority		
6. Development of a clear organization’s vision...	1	2	3	4	5
7. Establish norms for all decision teams & groups/stakeholders...	1	2	3	4	5
8. Communicate a clear understanding of the budget problem to all groups/ stakeholders...	1	2	3	4	5

**APPENDIX A (continued)**

	Low Priority			High Priority	
9. Focus on the budget-reduction problem as an opportunity or challenge...	1	2	3	4	5
10. Keep stakeholders informed during the whole process...	1	2	3	4	5
11. Develop a clear understanding of the criteria prior to developing the solutions.	1	2	3	4	5
12. Involve decision team in generating and prioritizing possible solution criteria.	1	2	3	4	5
13. Encourage creative brainstorming to generate possible solutions...	1	2	3	4	5
14. Clarify the decision-making process to all groups/stakeholders...	1	2	3	4	5
15. Work for consensus...	1	2	3	4	5
16. Involve a cross section of all stakeholders...	1	2	3	4	5

**APPENDIX A (continued)**

	Low Priority			High Priority	
17. Data sources including enrollment figures, Demographics, special population percentages, and programs, and services are provided to all decision-makers during the process.	1	2	3	4	5
18. Allocation of resources that ensure equity is a major focus in the process.	1	2	3	4	5
19. Keep the board informed of each step...	1	2	3	4	5
20. Establish a collaborative relationship with teacher organizations prior to the onset of budget crisis...	1	2	3	4	5

**Section III**

21. Please list any additional strategies that you deem as priorities when making budget reductions that were not included in the survey:

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22. Please list any hindrances encountered during the budget-reduction process. Leave blank if none were encountered:

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## **Appendix B**

### **Semi-Structured Interview: Budget-Reduction Process**

1. How do you ensure the vision of the district is maintained throughout the budget-reduction process?
2. How do you ensure participation and a cross-section of stakeholders throughout the budgetary reduction process?
3. How do you communicate the budget deficit to all stakeholders?
4. How do you ensure transparency throughout the budget-reduction process?
5. Do you have a process to prioritize expenditures & budget-reduction options for the upcoming school year?
6. As you prioritize expenditures, how do you ensure equitable distribution of budgetary resources for all your special programs?
7. If you have previously had to reduce your budgets, what has been the overall impact of the budget reductions on the overall academic program?
8. How will the district budget reductions affect your 2011-2012 program implementation?
9. What will be the overall impact on the district's special programs for the 2011-2012 school year?
10. What changes have occurred in your district as a result of the budget deficit?
11. Are there any additional comments about the budget-reduction process you wish to add?

### Appendix C

C-1. Descriptive Statistics: Per-Pupil Expenditure Means for the Sample Size (n=60) of High-Wealth and Low-Wealth Property School Districts for School Year 2010-2011

Function	N	Minimum	Maximum	Mean	Std. Deviation
11-Instruction	60	2954	8290	4560.55	862.593
12-Library Services	60	51	2885	181.00	358.078
13-Staff Development	60	0	303	85.20	53.078
21-Instructional Administration	60	0	303	103.79	70.476
23-Campus Administration	60	246	694	465.85	90.187
31-Counseling	60	46	423	249.85	74.396
32-Social Services	60	0	78	15.10	19.373
33-Health Services	60	4	307	90.06	38.257
34-Transportation	60	37	2905	334.50	359.282
36-Extracurricular	60	83	1530	354.19	222.906
41-General Administration	60	147	1772	375.78	262.118
51-Maintenance	60	570	4005	1128.27	516.465
52-Security Services	60	0	170	58.42	45.152
53-Data Processing	60	0	316	75.99	67.948
61-Community Services	60	0	276	25.46	46.738
Payroll	60	5020	15242	6519.68	1323.621
Valid N (listwise)	60				



**Appendix C (continued)**

C-2. Descriptive Statistics: Per-Pupil Expenditure Means for the Sample Size (n=60) of High-Wealth and Low-Wealth Property School Districts for School Year 2011-2012

Function	N	Minimum	Maximum	Mean	Std. Deviation
11-Instruction	60	3065	10040	4421.75	882.756
12-Library Services	60	41	212	123.18	35.385
13-Staff Development	60	0	241	82.88	49.760
21-Instructional Administration	60	0	280	106.82	64.183
23-Campus Administration	60	0	693	443.85	97.260
31-Counseling	60	107	609	254.15	82.219
32-Social Services	60	0	224	18.57	32.122
33-Health Services	60	3	358	88.42	41.413
34-Transportation	60	0	1469	293.15	187.423
36-Extracurricular	60	124	1701	341.75	236.844
41-General Administration	60	134	1613	367.72	255.132
51-Maintenance	60	538	4866	1102.98	590.488
52-Security Services	60	0	177	57.85	42.532
53-Data Processing	60	15	724	135.93	101.875
61-Community Services	60	0	344	20.10	48.832
Payroll	60	5118	15242	6491.73	1315.432
Valid N (listwise)	60				

**Appendix C (continued)**

**C-3. Descriptive Statistics: Per-Pupil Expenditure Sample Size (n=60) Mean Comparison**

Function	N	Mean	Mean
		2011	2012
11-Instruction	60	4560.55	4421.75
12-Library Services	60	181.00	123.18
13-Staff Development	60	85.20	82.88
21-Instructional Administration	60	103.79	106.82
23-Campus Administration	60	465.85	443.85
31-Counseling	60	249.85	254.15
32-Social Services	60	15.10	18.57
33-Health Services	60	90.06	88.42
34-Transportation	60	334.50	293.15
36-Extracurricular	60	354.19	341.75
41-General Administration	60	375.78	367.72
51-Maintenance	60	1128.27	1102.98
52-Security Services	60	58.42	57.85
53-Data Processing	60	75.99	135.93
61-Community Services	60	25.46	20.10
Payroll	60	6519.68	6491.73
Valid N (listwise)	60		

### Appendix C

C-4. Descriptive Statistics: Per-Pupil Expenditure Means for High-Wealth Property School Districts for School Year 2010-2011

Function	N	Minimum	Maximum	Mean	Std. Deviation
11-Instruction	30	3885	8290	4909.11	976.758
12-Library Services	30	51	2885	224.10	504.329
13-Staff Development	30	0	303	98.14	59.876
21-Instructional Administration	30	0	252	105.91	66.630
23-Campus Administration	30	292	694	469.87	89.818
31-Counseling	30	46	362	256.33	74.893
32-Social Services	30	0	75	11.01	16.912
33-Health Services	30	35	307	94.08	48.882
34-Transportation	30	37	2905	406.37	492.402
36-Extracurricular	30	83	1530	356.12	283.001
41-General Administration	30	147	1772	382.20	325.549
51-Maintenance	30	570	4005	1159.23	677.054
52-Security Services	30	0	154	49.53	43.882
53-Data Processing	30	0	153	48.34	42.111
61-Community Services	30	0	276	35.02	62.527
Payroll	30	5392	15242	6749.67	1709.578
Valid N (listwise)	30				

**Appendix C (continued)**

C-5. Descriptive Statistics: Per-Pupil Expenditure Means for High-Wealth Property School Districts for School Year 2011-2012

Function	N	Minimum	Maximum	Mean	Std. Deviation
11-Instruction	30	3640	10040	4655.70	1107.836
12-Library Services	30	49	203	118.20	32.829
13-Staff Development	30	0	241	92.47	58.670
21-Instructional Administration	30	0	267	104.00	65.079
23-Campus Administration	30	362	693	458.83	72.195
31-Counseling	30	107	435	257.17	71.141
32-Social Services	30	0	46	9.97	12.689
33-Health Services	30	33	358	90.77	53.697
34-Transportation	30	0	1469	326.47	246.271
41-Extracurricular	30	130	1701	350.60	302.330
41-General Administration	30	134	1613	369.83	305.967
51-Maintenance	30	538	4866	1159.53	791.643
52-Security Services	30	0	145	44.37	36.904
53-Data Processing	30	58	724	168.97	118.278
61-Community Services	30	0	344	27.27	66.474
Payroll	30	5392	15242	6749.67	1709.578
Valid N (listwise)	30				

**Appendix C (continued)**

C-6. Descriptive Statistics: Per-Pupil Expenditure Means for Low-Wealth Property School Districts for School Year 2010-2011

Function	N	Minimum	Maximum	Mean	Std. Deviation
11-Instruction	30	2954	6164	4212.00	555.316
12-Library Services	30	61	265	137.90	51.676
13-Staff Development	30	23	198	72.27	42.428
21-Instructional Administration	30	0	303	101.67	75.207
23-Campus Administration	30	246	664	461.83	91.909
31-Counseling	30	112	423	243.37	74.596
32-Social Services	30	0	78	19.20	21.042
33-Health Services	30	4	121	86.03	23.554
34-Transportation	30	112	464	262.63	97.324
36-Extracurricular	30	147	639	352.27	144.880
41-General Administration	30	174	869	369.37	183.613
51-Maintenance	30	737	1711	1097.30	286.853
52-Security Services	30	0	170	67.30	45.374
53-Data Processing	30	14	316	103.63	77.709
61-Community Services	30	0	58	15.90	18.591
Payroll	30	5020	9132	6289.70	729.569
Valid N (listwise)	30				

**Appendix C (continued)**

C-7. Descriptive Statistics: Per-Pupil Expenditure Means for Low-Wealth Property School Districts for School Year 2011-2012

Function	N	Minimum	Maximum	Mean	Std. Deviation
11-Instruction	30	3065	5957	4187.80	494.819
12-Library Services	30	41	212	128.17	37.659
13-Staff Development	30	19	160	73.30	37.488
21-Instructional Administration	30	0	280	109.63	64.260
23-Campus Administration	30	0	643	428.87	116.485
31-Counseling	30	114	609	251.13	93.131
32-Social Services	30	0	224	27.17	42.251
33-Health Services	30	3	128	86.07	24.381
34-Transportation	30	133	423	259.83	92.302
36-Extracurricular	30	124	653	332.90	150.196
41-General Administration	30	151	890	365.60	196.987
51-Maintenance	30	720	1794	1046.43	275.790
52-Security Services	30	0	177	71.33	44.072
53-Data Processing	30	15	336	102.90	69.768
61-Community Services	30	0	66	12.93	18.063
Payroll	30	5118	8640	6233.80	678.297
Valid N (listwise)	30				

**Appendix C (continued)**

C-8. Descriptive Statistics: Per-Pupil Expenditure Mean Comparison for School Years 2010-2011 to 2011-2012 for High-Wealth Property School Districts

Function	N	Mean 2011	Mean 2012
11-Instruction	30	4909.11	1107.836
12-Library Services	30	224.10	32.829
13-Staff Development	30	98.14	58.670
21-Instructional Administration	30	105.91	65.079
23-Campus Administration	30	469.87	72.195
31-Counseling	30	256.33	71.141
32-Social Services	30	11.01	12.689
33-Health Services	30	94.08	53.697
34-Transportation	30	406.37	246.271
36-Extracurricular	30	356.12	302.330
41-General Administration	30	382.20	305.967
51-Maintenance	30	1159.23	791.643
52-Security Services	30	49.53	36.904
53-Data Processing	30	48.34	118.278
61-Community Services	30	35.02	66.474
Payroll	30	6749.67	1709.578
Valid N (listwise)	30		

**Appendix C (continued)**

C-9. Descriptive Statistics: Per-Pupil Expenditure Mean Comparison for School Years 2010-2011 to 2011-2012 for Low-Wealth Property School Districts

Function	N	Mean 2011	Mean 2012
11-Instruction	30	4212.00	4187.80
12-Library Services	30	137.90	128.17
13-Staff Development	30	72.27	73.30
21-Instructional Administration	30	101.67	109.63
23-Campus Administration	30	461.83	428.87
31-Counseling	30	243.37	251.13
32-Social Services	30	19.20	27.17
33-Health Services	30	86.03	86.07
34-Transportation	30	262.63	259.83
36-Extracurricular	30	352.27	332.90
41-General Administration	30	369.37	365.60
51-Maintenance	30	1097.30	1046.43
52-Security Services	30	67.30	71.33
53-Data Processing	30	103.63	102.90
61-Community Services	30	15.90	12.93
Payroll	30	6289.70	6233.80
Valid N (listwise)	30		



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