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In response to a challenging state economy, the Texas Legislature implemented the Regular Program Adjustment Factor (RPAF) in 2011, effectively reducing state funding to all Texas school districts. This mixed methods study reveals the effect of the RPAF on a sample of the smallest Texas school districts and their response to decreased state funding – inclusive of reducing staff, implementing tax rollback and bond elections, and securing revenue from other, non-traditional, financing sources, which ultimately served as the largest revenue enhancement – 97 percent of which was comprised of the issuance of capital-related debt.

Keywords: school finance, small school districts, mixed methods

Small public school districts scattered across Texas serve not only as educational institutions, but as the life blood of their communities. The school district is typically the largest local employer and a vast majority of community functions directly involve the parents, children and employees. For the students living within the district's boundaries, the school district serves as a place of learning and as a literal anchor for the history and traditions in these locales. In the sometimes recent past, whole small communities have either disappeared or become virtually non-existent following the closing of their school districts.

Regardless of the importance of small school districts to their communities, they are extensions of the state government (Bigham, 2013) pursuant to Article 7, §1 of the Texas Constitution, with the primary mission of providing a quality education to their students (TEC §4.01(a)). As extensions of state government, they are subject to the same laws, policies, rules, and regulations as their larger counterparts. From a funding perspective, small school districts struggle with diseconomies of scale as they endeavor to comply with legal requirements in place for all public school districts in the state. Moreover, many of the smallest Texas public school districts have experienced decreasing student enrollments in recent years (Bigham & Nix, 2013), compounding their financial dilemmas in light of a state funding system that relies heavily on student enrollment as a basis for allocating funds to the state's public school districts.

Problem, Purpose, and Research Questions

In response to the challenging state economy faced by the 82nd Texas Legislature, the Regular Program Adjustment Factor (RPAF) was implemented to reduce state funding to public school districts (TEC §42.101(c-1)). More specifically, the RPAF was an adjustment factor designed to reduce all Texas public school districts' regular program allotments (i.e., basic state aid) by 7.61 percent in the 2011-12 school year and 2 percent in the 2012-13 school year (TEC §42.101(c-1)).

The purpose of this study was to determine how small Texas public school districts responded to the 7.61 percent cut in basic state aid. With RPAF coming into play, two research questions surfaced and this study was designed to answer them. First, what was the effect of the RPAF on state funding in the smallest Texas school districts? Second, how did the smallest Texas school districts respond to any change in state funding resulting from the RPAF?

Theoretical Framework

Among the major theories of adequacy, equity, efficiency, and equalization applicable to school finance, the theory of adequacy was designated as most appropriate for this study. While giving credence to equity issues, and simultaneously acknowledging the increased goals and requirements placed on public school districts (NCLB, 2001), the concern of funding adequacy rises to the forefront. In simple terms, adequacy addresses the ability of a school district to generate enough money to fund its operations. Odden and Picus (2008) more thoroughly

defined adequacy as "the provision of a set of strategies, programs, curriculum, and instruction, with appropriate adjustments for special-needs students, districts, and schools, and their full financing, that is sufficient to teach students to high standards" (p. 75). Brimley, Verstegen, and Garfield (2012) stated that "inequities in the amounts of revenue available per person to be educated and heavy property tax burdens on individual citizens have provided motivation for school finance reform in nearly every state" (p. 30), where the wording "amounts of revenue" equates to adequate funding. Given the nature and purpose of the RPAF in Texas, funding adequacy was the most appropriate theoretical framework upon which to base this study.

Literature Review

"Nationally, rural students represent about a quarter of all students attending public school" (Johnson, Malhoit, & Shone, 2012, n.p.). Smaller rural schools are funded at a lower level (in part due to a declining tax base) than their counterparts in urban areas (Lindahl, 2011) but their per-pupil costs are actually higher (Johnson et al., 2012). Consequently, rural schools, serving one quarter of US students, have been impacted dramatically by repeated budget cuts. Issues such as dropping enrollment in part due to economic decline and depopulation, high student mobility as a result of families moving to find work, and a crumbling infrastructure of school buildings (Schwartzbeck, 2003), combined with the simultaneous increase in student and teacher accountability (VonSchnase, 2010), impact the education process significantly in rural areas. Since the early 2000's, schools across the nation, both urban and rural, have been hit by funding cuts causing them to react in myriad ways to maintain educational quality and financial solvency (Anderson, 2013; Cavanaugh, 2011; Chittum, 2012; Johnson et.al., 2012; McNeil, 2009; Mestas, 2011; Mortland, 2004; Nesbitt, 2013; Patterson, 2009; Richard, 2004, 2006; Sherard, 2014). In response to budget cuts impacting rural schools in particular, programs like Gifted and Talented were often forced to be cut (Schemo, 2004); school weeks were shortened (Mestas, 2011; Patterson, 2009); non-certified staff were reduced (Mestas, 2011; Sherard, 2014;); personnel retired early (Cavanaugh,2011); administrator cuts or reassignments were recommended (Richard, 2006); teachers covered more than one discipline (and had to be fully certified to make those changes) (Cavanaugh, 2011; Bailey & Preston, 2007); and consolidation was mandated (Malone, 2011; Cronin, 2010; Bailey & Preston, 2007). Repeated budget cuts forced these changes on many rural school districts.

Small School Effectiveness

The primary mission of all Texas schools is to provide a quality education to their students (TEC §4.01(a)). With respect to this mission, in examining small public school districts, a nation-wide study funded by the Gates Foundation discovered graduation rates in small schools that exceeded those in larger schools (Preston, 2012). Moreover, with the increasing importance placed on the use of technology and other education innovations (American Recovery and Reinvestment Act, 2009; Idaho State Department of Education, 2008; Odden, 2012; USDE, 2010), Pennsylvania (also known as the third most rural state in the nation) pioneered the use of technology for distance learning (Hillman, 2003). Due to limited resources and remote geographic locations, small and rural Texas schools are increasingly accessing technology for digital content as well as for e-learning and virtual schools (TEA, 2006). In doing so, technology has the potential to sustain overall educational effectiveness on a cheaper budget. However, despite the effectiveness of small schools on limited resources, one fact still remains – adequate funding is required to maintain educational effectiveness. Odden (2012), Petrilli (2012), Travers & Ferris (2011), and Williamson (2011) all found correlations between student performance and levels of financing in all schools – both large and small.

School-Community Partnership

The school-community relationship may be viewed as reciprocal as a result of the school's dependency on tax revenues generated from properties in the community and in most small community settings, the school serves as the largest employer. However, this is only one aspect of the school-community relationship. Measuring the impact of the total community and school relationship is difficult at best (Mathis, 2003).

Harmon and Morton (2010) researched what they called "frontier" schools based on a population of 200 or fewer students in sparsely populated areas of Montana. The range of concerns was similar to small schools in other states and included inadequate financial resources and the need for practices contributing to school sustainability. Community members serving as school personnel viewed the school as vital to maintaining the surrounding agricultural community, demonstrating the clear connection between the school in a small town setting and the community it serves.

Watson and Reigeluth (2008) studied schools in Indiana for community involvement in a small school. They emphasized the importance of involving the community in school change issues by saying, "community involvement is crucial for generating the grass-roots political support of respected parents, business leaders, and other community leaders for systemic transformation in schools" (p. 48), verifying the importance of the interconnectedness between the school and community. As a school population and budgets decrease, in some cases, personnel have to be retired, reassigned, or dismissed from employment (Cavanaugh, 2011; Mestas, 2011) and the previous school employees are forced to leave the community to find work. Small communities have often developed school and business relationships supporting schools during budget cuts (Idaho State Department of Education, 2008; Johnson et al., 2012; Nesbitt, 2013; NREA, 2004). Some rural schools have launched extensive marketing programs to increase a declining student population (Richard, 2004). In York, Nebraska, home sites were given freely to entice family resettlement (Richard, 2004). To gain the attention of lawmakers, the National Rural Education Association awarded a senator for his service to rural education (Richard, 2006). Other schools asked their voters to impose an income tax instead of an increased property tax to pay for schools (Mortland, 2004). Communities, businesses, and professional organizations have used innovative methods to sustain their rural schools.

The Need for Adequate Funding

According to Odden and Picus (2008), "adequacy is the key focus of school finance litigation, and increasingly of school finance policy as well" (p. 75). At the implementation level, state funding is received by schools through structured funding systems. When funding is inadequate to support the needs of the schools, schools are forced to find solutions, both long and short term that they might not otherwise make.

The Rural School and Community Trust (2001) focused on issues relating to small rural schools. Funding issues had a clear impact on many aspects of those schools in the states of Vermont, North Carolina, and Nebraska. Bailey and Preston (2007) analyzed the school finance structure in Nebraska and concluded that the funding formula contributed to the movement towards rural school consolidations, while simultaneously ignoring the virtues of those individual schools.

Consolidation has been explored in Texas schools as a solution to maintaining a school in the vicinity. Unfortunately, financial hardships sometimes drive schools to this end. Schulken (2010) affirmed the integral relationship between the community and small schools with the statement; "rural communities have strengths that help compensate for the challenges of lower pay and fewer living amenities. Rural communities back you when you triumph and when you don't" (p.5). In other words, the integral relationship between the school and small community generally sustains and supports the longevity of the school. Funding inadequacy exacerbates this relationship.

Research Design

The QUAN-QUAL mixed methods research design was employed in this study. In the QUAN-QUAL design, "quantitative and qualitative data are equally weighted and are collected concurrently throughout the same study – the data are not collected in separate studies or distinct phases" (Gay, Mills, & Airasian, 2006, p. 491).

In applying the QUAN-QUAL approach, the quantitative causal-comparative research design was utilized to describe the effect of the RPAF on state funding in the smallest Texas public school districts and both qualitative and quantitative content analysis methodologies were used to determine the school districts' response to decreased state funding.

The cause-effect relationship sought in this study centered on determining the alpha level, through hypothesis testing, at which the RPAF caused a significant reduction in state funding by comparing small Texas school districts' mean state funding from the 2010-11 (pre-RPAF) school year to the 2011-12 (RPAF) school year. The null hypothesis, H_o: The smallest Texas public school districts experienced no change in state funding as a result of the RPAF, was tested at multiple alpha levels, using the independent t test statistic, to establish the degree to which the RPAF was responsible for decreased state funding.

Content analysis methodologies (Hsieh & Shannon, 2005) were employed to respond to the second research question *how did the smallest Texas school districts respond to any change in state funding resulting from the RPAF?* The analyzed content consisted of data published annually in official Texas Education Agency (TEA) reports for every Texas school district (TEA, 2012).

The reports used were the most current publicly accessible records available at the initiation of this study. Moreover, the reports used for quantitative purposes were simultaneously analyzed to fulfill the qualitative dimension of the study.

Content analysis may assume a quantitative dimension. Berelson (1952) defined content analysis as "a research technique for the objective, systematic,

and quantitative description of the manifest content of communication" (p. 18). As Gall, Gall, and Borg (2003) expressed, "These analyses generally involve fairly simple classifications or tabulations of specific information" (p. 278). The quantitative component of the content analysis in this study consisted of coding, categorically organizing, and summing qualitative findings for concise, numerical reporting.

Population and Sample

The sample of the small Texas school district population selected for this study was classified as Conference 1A 6-Man Division 2 school districts in the 2012-14 official football district alignment of the University Interscholastic League (UIL, 2012). This alignment consisted of 67 school districts grouped into sixteen UIL districts in four regions of the state and represented the smallest school districts, with football teams, based on high school enrollments on the official snapshot reporting date. The primary limitation of this sampling method is that generalizations are restricted to small Texas school districts with football teams, but the advantage to the researchers was ease of small school district selection. In Texas, the UIL created athletic sports alignments, based on high school enrollments ranging from 1A to 5A in the 2012-14 classifications where 1A was subdivided into 1A, 1A 6-man Division 1, and 1A 6-man Division 2. The 1A 6-man Division 2 school districts represented high schools with the lowest enrollments across the state. The 67 school districts selected served as a good representation of the smallest school districts in terms of both enrollment and geographical distribution. Once the 67 public school districts were identified from the 1260 public and charter schools in the state, statistical information was pulled from their state accountability and financial reports. The cumulative total PK-12 student enrollment in the 67 school districts in 2011-12 was 10,472. By individual school district, enrollments ranged from 56 to 303 with a mean enrollment of 156.3 and a median enrollment of 150.

Data Collection

All quantitative and qualitative data were extrapolated from the individual school districts' Academic Excellence Indicator System (AEIS) reports and Comprehensive Annual Financial Reports (CAFRs), both of which were published on the TEA website. More specifically, from the 2010-11 and 2011-12 records, quantitative data consisted of student enrollments, staff numbers, and tax rates pulled from the AEIS reports, and total school district revenues, expenditures, and fund balances pulled from the CAFRs. These extrapolated data were organized on a spreadsheet in rows by school district and in columns by financial descriptor. In addition to the tax rates, qualitative data of particular interest came from the *Other Financing Sources* section of the CAFRs, and were also organized on a spreadsheet in the same fashion.

Data Analysis

Data were examined from a global perspective and reported as descriptive statistics to describe the range of state funding received by school districts in the 2010-11 and 2011-12 school years. The differences per school district in state funding were graphed by means of a scatter plot in Figure 1 to visually display the variances and to identify possible outliers.

Following adjustments for outliers, the collected data were analyzed via quantitative and qualitative means. The null hypothesis, (the first research question restated in hypothesis form) was tested via the inferential independent t test statistic and the second research question was addressed through the use of the qualitative and quantitative content analysis methodologies.

State revenue data in the 2010-11 school year were used to calculate the population mean revenue μ hypothesized from the null hypothesis H_o. The independent (treatment) variable was the RPAF and the dependent variable, state revenue from the 2011-12 school year, was used for the sample mean $\bar{x}$ in calculating the independent t statistic.

Mathematically, with the n being adjusted for outliers, where the H_o: μ = \$977,585, and $\bar{x}$ = \$923,883, hypothesis tests were conducted at α = 0.05, 0.10, 0.20, and 0.30 for two tails with 63 degrees of freedom. From an a priori position, testing at multiple and elevated alpha levels is non-traditional. Consequently, an a posteriori position was assumed to establish the degree to which state funding was affected by the RPAF as an isolated variable in light of the numerous extraneous variables potentially affecting state funding through the complex Texas Foundation School Program (FSP).

To determine how the smallest Texas school districts responded to the reduction in state funding as a result of the RPAF, data were mined from all records through means of qualitative content analysis techniques. In qualitative research, one finding often leads to more questions, as was the case in this study. As findings were unveiled in this process, qualitative data were entered into spreadsheets and further analyzed by means of quantitative content analysis. The primary objective of the qualitative content

analyses was "to describe prevailing practices or conditions" (Best & Kahn, 2006, p. 257). Then data were organized for presentation in the form of frequency counts and summations in the results section of this study.

Results

The findings of the QUAN-QUAL analyses were organized in the same order as described in the methodology section. This section begins with descriptive statistics from a more global view, followed by the inferential statistics calculated in relation to the causal-comparative portion of the study, and ends with the content analyses.

Descriptive Statistics

For the sample of n = 67 school districts, the initial descriptive analysis revealed a cumulative difference in state funding from 2010-11 to 2011-12 of ($1,251,410), with a mean of ($18,678), where the parentheses represent negative numbers. The variance among the districts spanned from a low (loss) of ($444,746) to a high (gain) of $1,030,299, a range of $1,475,045. Within this range, 22 school districts gained a combined total of $4,563,401, a mean increase of $207,427 in 2011-12 over the amount received in 2010-11, and 45 school districts lost a combined total of ($5,814,811), a mean of ($129,218).

The scatter plot (Figure 1) reveals that pre-RPAF to RPAF implementation year differences in state revenue can be mostly contained within an arbitrary band ranging from ($400,000) to $400,000, with the exception of three that were slightly below ($400,000) and three that were considerably above $400,000.).

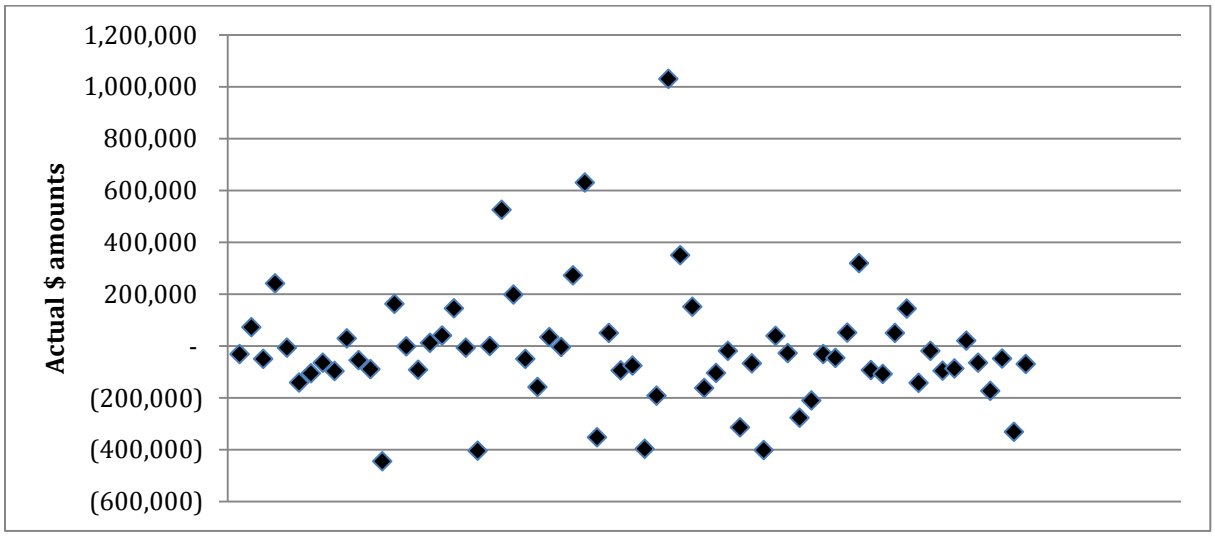

Figure 1. Differences in state revenue received by n=67 school districts from pre-RPAF to RPAF implementation years.

Whereas the three districts below ($400,000) ranged from ($401,892) to ($444,746), the three above $400,000 ranged from $524,844 to $1,030,299. Because their state revenue differences were so far above the other 64 school districts, and would skew any calculated analyses relying on mean scores, they were identified as outliers and were removed from all data sets, reducing the n from 67 to 64. The outlier removal resulted in $82,276 fewer dollars gained by the remaining 19 districts. This 40 percent substantial revenue reduction adequately justified the removal of the three outliers. Data comparing revenue gains and losses for n = 67 and n = 64, are displayed in Table 1.

Inferential Statistics

Cumulative and mean state revenues were calculated for n = 64 school districts as reported in Table 2. While the RPAF was designed to reduce state funding by 7.61 percent in its implementation year, the cumulative reduction of this sample of school districts was only 5.5 percent. Although a cursory examination of the data in Table 2 shows a

5.5 percent decrease in state funding, to completely answer the research question "What was the effect of the RPAF on state funding in the smallest Texas school districts?," hypothesis testing using the independent t statistic was conducted at multiple alpha levels to more precisely define the degree of impact directly attributable to the RPAF. Where the H_o: μ = \$977,585 and $\bar{x}$ = \$923,883 at α = 0.05, 0.10, 0.20, and 0.30 for two tails with 63 degrees of freedom, the critical t = +1.980 or -1.980, +1.658 or -1.658, +1.289 or -1.289, and +1.041 or -1.041 respectively (Clark & Schkade, 1979). The calculated t statistic was p = -1.1733, which was significant only at α = 0.30.

Table 1
School District State Revenue Gains/Losses from Pre-RPAF to RPAF Implementation

Levels of Analysis	State Revenue Gains/Losses from 2010-11 to 2011-12 Gains n = 22/19*		Losses n = 45/45*		Net Revenue Gains/Losses Totals n = 67/64*	
	Cumulative	Mean	Cumulative	Mean	Cumulative	Mean
N = 67	\$4,563,401	\$207,427	(\$5,814,811)	(\$129,218)	(\$1,251,410)	(\$18,678)
N = 64	\$2,377,871	\$125,151	(\$5,814,811)	(\$129,218)	(\$3,436,940)	(\$53,702)
Change	(\$2,185,530)	(\$82,276)	0	0	(\$2,185,530)	(\$35,024)

Note: *n = 64 following removal of three outliers.

Table 2
State Revenue Generated in Pre-RPAF and RPAF Implementation Years

State Generated Revenue 2010-11(Pre-RPAF) μ (n=64)		2011-12 (RPAF) $\bar{x}$ (n=64)		Difference		% Change
Cumulative	Mean	Cumulative	Mean	Cumulative	Mean	
\$62,565,471	\$977,585	\$59,128,531	\$923,883	(\$3,436,940)	(\$53,702)	-5.5%

Content Analyses

Qualitative methods of content analysis were employed to answer the research question, "How did the smallest Texas school districts respond to any change in state funding resulting from the RPAF?" The qualitative analyses were designed to search for answers regarding how school districts responded. These qualitative analyses were then converted to quantitative analyses for numerical reporting in table format for n=64 Texas public school districts.

The first of a series of investigations of financial records focused on fund balances. Fund balances, reported in the school districts' CAFRs, describe one year of financial operations by reporting the total amount of money possessed by the school district at the beginning of the fiscal year as compared with what remains at the end of the fiscal year. Although the RPAF contributed to a 5.5 percent decrease in state funding, interestingly, the mean fund balance increased by 13 percent as reported in Table 3.

Table 3
Change in Fund Balance from Beginning to End of RPAF Implementation Year

Beginning		Ending		Change		% Change
Cumulative	Mean	Cumulative	Mean	Cumulative	Mean	
\$87,467,192	\$1,366,675	\$98,844,616	\$1,544,447	\$11,377,424	\$177,772	13%

This finding of increased mean fund balance suggested that either revenue lost in state funding was more than made up for in other revenue sources, or expenses were disproportionately reduced in relation to the state funding reduction, or both. This anomaly led to an examination of revenues generated and expenditures dispersed by the school districts. The Texas CAFRs categorize traditional revenue as *Local and Intermediate Sources*, *State Program Revenues*, and *Federal Program Revenues*. These three sources are summed and reported as *Total Governmental Revenues*. Likewise, the *Expenditures* section of the CAFRs categorize expenses and total them as *Total Governmental*

Expenditures. The balance is calculated as revenue minus expense. Then, a section titled *Other Financing Sources* lists non-traditional sources of financing, as identified in Table 8, followed by an adjusted balance to account for any changes derived from this section of the report. To concisely display these data, the *Other Financing Sources* were added to *Total Revenues* as reported in Table 4.

Table 4
Total Budget Comparisons in Pre-RPAF and RPAF Implementation Years

Levels of	Revenue		Expenses		Balance	
Analysis	Cumulative	Mean	Cumulative	Mean	Cumulative	Mean
10-11	$195,751,518	$3,058,617	$192,116,267	$3,001,816	$3,635,251	$56,801
11-12	$195,225,058	$3,050,391	$183,847,634	$2,872,619	$11,377,424	$177,772
$ Change	($526,460)	($8,226)	$8,268,633	$129,197	$7,742,173	$120,971
% Change	-0.27%		4.3%		213%	

In comparing the 2010-11 to the 2011-12 fiscal years, school districts generated 0.27 percent less total revenue, cut expenditures by 4.3 percent, and netted 213 percent in remaining balance. The data in Table 4 indicates that a major contributor to the larger mean balance of $177,772 in 2011-12 was the $129,197 mean reduction in expenditures. For purposes of data validation, note that the increased mean balance of $177,772 in Table 4 matches the increased mean change in fund balance reported in Table 3.

Since the data in Table 4 indicate that the smallest Texas school districts reduced expenditures by 4.3 percent and seemingly took steps to lighten the RPAF blow on the finance side of the equation by generating revenue from other sources, further content analyses were necessary to determine where cuts were made in expenditures and financing was generated to supplement state funding, effectively reducing the 5.5 percent slash in state financing down to only a 0.27 percent total revenue decrease.

Since salaries and employee benefits consume the largest portion of funds allocated to the educational enterprise (Norton & Kelly, 1997), staff numbers were needed to determine the role, if any, this played in expenditure reductions. Then, on the revenue side, student enrollment and tax collections serve as major revenue generators within the Texas FSP. Consequently, student enrollment figures, staff numbers, and tax rates were pulled from AEIS reports. From this data set, the first comparisons are reported in Table 5 as enrollment and staff.

Table 5
Student Enrollment and Staff Employed in Pre-RPAF and RPAF Implementation Years

Levels of	Enrollment		Staff	
Analysis	Cumulative	Mean	Cumulative	Mean
10-11	10,207	159.5	2185.5	34.1
11-12	10,000	156.3	2022.3	31.6
Change	(207)	(3.2)	(163.2)	(2.5)
percent Change	-2%		-7.5	

The 7.5 percent cut in staff numbers speaks to the school districts' efforts to reduce expenditures, but the 2 percent reduced student enrollment fails to address how additional revenue was generated to inflate the 5.5 percent loss in state funding. Since enrollment actually exacerbated the state funding loss, tax rates adopted by local school boards were the next logical content to analyze. In Texas, property values are assessed by County Appraisal Districts (CAD) and tax rates are adopted by local school boards. Thus, the only control school boards have over revenues generated through the taxation process is through tax rate adoption. School boards may adopt Maintenance and Operations (M&O) tax rates within certain statutory limitations. While the statutory limits vary by school district depending upon their 2005-06 adopted M&O tax rate, since the majority of the Texas school districts were taxing at $1.50/$100 of assessed valuation (AV) in 2005-06 (Neeley v. West Orange Cove, 2005), M&O tax rate data were organized in Table 6 based on the current statutory structure devised in response to those school districts taxing at $1.50/$100 AV in 2005-06. Under this structure, M&O tax rates were compressed to $1.00/$100 AV and school boards had discretion to add $0.04 to that. Any pennies of taxation exceeding $1.04 required a Tax Rollback Election (TRE) whereby M&O tax rates could be increased, only by voter approval, to a total statutory maximum of $1.17/$100 AV. As depicted in Table 6, one tactic

used by these small Texas school districts was to increase M&O tax rates by an average of $0.008. The data indicate that four TREs were approved by voters, allowing school districts to increase their M&O tax rates to $1.17/$100 AV in 2011-12.

Table 6
M&O Tax Rates in Pre-RPAF and RPAF Implementation Years

Levels of Analysis	$0.847 ← Range of M&O Tax Rates → $1.17								Totals		Mean Tax Rate
	<1.04		1.04		>1.04 <1.17		1.17				
	n	%	n	%	n	%	n	%	N	%	
10-11	6	9	33	52	4	6	21	33	64	100	1.081
11-12	5	8	30	47	4	6	25	39	64	100	1.089
Change	-1	-1	-3	-5	0	0	+4	+6			0.008

In addition to M&O tax rates, Texas school boards have the option of adding Interest and Sinking (I&S) fund tax rates, with voter approval, for capital purchases. As revealed in Table 7, the mean I&S tax rate increased $0.03/$100 AV.

Table 7
I&S Tax Rates in Pre-RPAF and RPAF Implementation Years

Levels of Analysis	n	Range	Mean Tax Rate
10-11	26	0.01 – 0.44 = 0.43	0.138
11-12	25	0.03 – 0.47 = 0.44	0.168
Change	(1)	0.01	0.03
% Change	-3.8	2.3	21.7

Given that tax rate efforts contributed little toward supplementing depressed revenues and declining student enrollments adversely affected state revenues received, some other source of funding had to be responsible for lightening the expected RPAF blow to overall revenue. Further probing revealed that revenue gained through *Other Financing Sources*, as reported on the school district CAFRs, was mostly responsible. Of the 64 school districts in the sample, 25 gained a cumulative total $40,752,899 in additional revenue from other financing sources. As reported in Table 8, six categories of other financing sources were utilized by these 25 school districts, some of which profited from more than one category of alternative financing, resulting in a total n = 35 instead of 25.

Table 8
Sources of Other Financing during RPAF Implementation Year

Other Financing Sources	n	Total Other Financing	
		Cumulative	Mean*
Sale of Real and Personal Property	12	$253,190	$21,099
Proceeds from Capital Leases	5	$575,639	$115,127
Capital Related Debt Issued	11	$39,518,017	$3,592,547
Non-Current Loan Proceeds	2	$33,058	$16,529
Insurance Recovery	1	$189,358	$189,358
Other	4	$183,637	$45,909
Totals	35	$40,752,899	$1,164,369

Note: * Mean scores were derived by dividing the number in the cumulative column by its corresponding n

Discussion

In summary, although the small Texas school districts in this study experienced an overall fund balance growth, they did lose 5.5 percent of their state revenue after the RPAF implementation. Statistical analyses revealed that approximately 70 percent of that decrease could be attributed directly to the RPAF, as interpreted from the calculated t statistic p = -1.1733, which was significant only at $\alpha = 0.30$. In addition to the RPAF, one notable contributor to the remaining 30 percent of state revenue loss unveiled in the content analysis

was the percent decline in student enrollment. Nonetheless, in response to the first research question, the RPAF did play a major role in reducing state funding to the sample of school districts in this study.

In response to the second research question, these small Texas school districts employed several strategies to cushion the financial blow expected from the RPAF. They reduced expenditures by 4.3 percent primarily through a 7.5 percent reduction in staff. Some communities voted to approve TREs, increasing the mean M&O tax rate by $0.008/$100 AV, and passed bond elections, causing a $0.03/$100 AV mean increase in I&S tax rates. However, the major source of revenue enhancement for these small school districts was found in *Other Financing Sources* as cited on the school districts' CAFRs. Of the $195,225,058 of cumulative total revenue generated, 21 percent of it came from *Other Financing Sources* in the amount of $40,752,899, 97 percent of which came from the issuance of capital-related debt.

In spite of the $4 billion cut by the Texas Legislature from formula funding for all public school districts in 2011 (Villanueva, 2013), and despite the diseconomies of scale unique to small school districts, as a composite group, the small school districts in this study appear to be overcomers by the mean net gain in fund balance witnessed in the RPAF implementation year. However, in further examining the 5.5 percent state revenue reduction experienced by these school districts, the harsh reality is that 45, or 70 percent, lost state funding in the RPAF implementation year. In comparison with the previous year, overall, these school districts had $3,436,940 fewer state funds to educate 10,000 students, equivalent to a $3,437 reduction per student, with 163 fewer staff. In addition to substantive expenditure cuts, these school districts sought funding from other, more non-traditional sources such as selling real estate, collecting revenue from capital leases, issuing capital related debt, etc. Notably, the issuance of capital-related debt comprised 97 percent of the *Other Financing Sources* accessed by the small Texas school districts seeking additional funding.

Small Texas communities support their school districts as evidenced by the passing of TREs and bond elections. Although the school-community relationship is difficult to measure (Mathis, 2003), on the national level, Brimley et al. (2012) said, "The interconnection between education (providing the human capital to engender economic strength) and the economy (providing funds for education) is a reality" (p. 4). This statement seems to hold true at the small community level as well. At this smaller level, while the tax base serves as a financial support for the school district, the district, which is typically the largest employer, supports the community's economy by employing members of its population, and contributes to the community and society in general, through the development of human capital (Brimley et al., 2012).

Lastly, considering that the small school districts in this study made some significant cuts in personnel to reduce expenditures, went to the voting public to request TRE and bond election approval, and generated a sizable percentage of overall funding from *Other Financing Sources*, with respect to the theoretical framework within which this study was grounded, funding in the RPAF implementation year appears to have been inadequate. Further support for this conclusion lays in the fact that six school finance-related law suits were filed against the state during this period of time, and the State District Court concluded that Texas school districts were inadequately funded (Texas Taxpayer & Student Fairness Coal. v. Williams, 2013).

Implications

Inadequately funded Texas school districts (Texas Taxpayer & Student Fairness Coal. v. Williams, 2013) jeopardize the state's economic prosperity by risking a lower quality of education received by students, potentially resulting in ill-prepared human capital. Specific to the school districts in this study, the elimination of 163 personnel will potentially have an adverse effect on the overall quality of education for their students. Furthermore, the loss of these personnel potentially impacts the school districts' finances through the loss of tax revenue and/or student enrollment, and also potentially impacts the communities through the loss of population – assuming families relocate for financial reasons. As community population declines, student enrollment declines, and as student enrollment declines, the need for school personnel declines. If that trend continues, school districts will typically deplete *Other Financing Sources* until the school district can no longer operate financially, and the literature and history shows that when small school districts close, small communities tend to fade away.

Fortunately, for several reasons, that dismal outlook may be reversed. Keeping in mind that the most current data available at the time of this study was for the first year of the RPAF implementation designed to reduce state revenue to school districts by 7.61 percent (TEC §42.101(c-1)), in its second year of continuation (2012-13), the percentage was reduced to 2 percent (TEC §42.101(c-1)).

Furthermore, school finance related-actions of the 83rd Texas Legislature prompted the State District Court to reconsider the decisions rendered in Texas Taxpayer & Student Fairness Coal. v. Williams.

Suggestions for Further Research

As the TEA releases more current records, trends should be evaluated to see how the second and any subsequent years of RPAF continuation affect small Texas school districts and how they responded in that year. Enrollment and staffing trends should be examined to gauge both financial standings of the school districts as well as effects on populations in their respective communities. Lastly, effects of the money put back into education by the 83rd Texas Legislature as well as pending State District Court results from the re-hearing of the school finance litigation should be examined in relation to state funding in small Texas school districts.

References

Anderson, P.B. (2013, May 3). Evers: Walker ed plan harms rural schools. *LaCrosse Tribune*. Retrieved from http://lacrossetribune.com/news/local/evers-walker-ed-plan-harms-rural-schools/article_165ce1cc-b3ab-11e2-84f3-0019bb2963f4.html.

American Recovery and Reinvestment Act (ARRA) of 2009: Saving and Creating Jobs and Reforming Education. (2009, March 7). Retrieved from http://www2.ed.gov/print/policy/gen/leg/recovery/implementation.html

Bailey, J., & Preston, K. (2007). Big trouble for small schools. *Center for Rural Affairs*. Retrieved from http://files.eric.ed.gov/fulltext/ED503738.pdf

Berelson, B. (1952). *Content analysis in communication research*. Glencoe, IL: Free Press.

Best, J. W., & Kahn, J. V. (2006). *Research in education* (10th ed.). Boston, MA: Allyn and Bacon.

Bigham, G. D. (2013). Framework for understanding the legal structure of Texas public schools. *School Leadership Review, 8*(1), 5-23.

Bigham, G., & Nix, S. J. (2013, January). *Small schools' struggle for survival in financially challenging times*. Paper presented at the meeting of the Texas Council of Professors of Educational Administration, Austin, Texas.

Brimley, V., Verstegen, D. A., & Garfield, R. R. (2012). *Financing education in a climate of change* (11th ed.). Boston, MA: Pearson.

Chittum, M. (2012, May 31). Alleghany County mulls closing 2 rural elementary schools. *Roanoke Times*, p. A10.

Clark, C. T., & Schkade, L. L. (1979). *Statistical analysis for administrative decisions* (3rd ed.). Cincinnati, OH: South-Western.

Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston, MA: Allyn &Bacon.

Gay, L. R., Mills, G. E., & Airasian, P. (2006). *Educational research: Competencies for analysis and applications*. Upper Saddle River, NJ: Pearson.

Harmon, H. L., & Morton, C. (2010, June). *Frontier schools in Montana: Challenges and sustainability practices.* Retrieved from http://files.eric.ed.gov/fulltext/ED520063.pdf

Hillman, A. (2003). *The state of rural education in the Commonwealth of Pennsylvania, 2003.* Presented to the House Education Committee. Pennsylvania Association of Rural and Small Schools. Retrieved from http://files.eric.ed.gov/fulltext/ED473971.pdf

Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9). Retrieved from http://qhr.sagepub.com/content

Johnson, J., Malhoit, G., & Shone, S. (2012). Rural-specific concerns and strategies in the budget process [Abstract]. *School Business Affairs, 78*(3), 24-26. Abstract retrieved from eric.ed.gov/?id=EJ981973

Lindahl, R.A. (2011, Winter). The state of education in Alabama's K-12 rural public schools. *Rural Educator, 32*(2),1-12.

Mestas, A. (2011, April 8). Lamar schools tackle budget cut proposals. *The Pueblo Chieftain*. Retrieved from http://www.chieftain.com/

McNeil, M. (2009, August 22). Hurdles ahead in "Race to Top." *Education Week*. 29(1), 1.

Mortland, S. (2004, October 25). Schools looking to tap incomes. *Crain's Cleveland Business*, *25*(43), 4.

National Rural Education Association (NREA). (2004). *Critical issues in rural education: Position Paper I: No Child Left Behind.* Retrieved from http://files.eric.ed.gov/fulltext/ED497050.pdf

Neeley v. West Orange-Cove Consol. Indep. Sch. Dist., Tx. 04-1144, 05-0145, and 05-0148 (2005).

Nesbitt, K. (2013, July 1). Budgets vary from town to town. *The Observer*. Retrieved from http://www.lagrandeobserver.com/News/Local-News/Budgets-vary-from-town-to-town

No Child Left Behind Act (NCLB) of 2001, 20 U.S.C. § 6319

Norton, S. N., & Kelly, L. K. (1997). *Resource allocation: Managing money and people*. Larchmont, NY: Eye on Education.

Odden, A.R. (2012). *Improving student learning when budgets are tight*. Thousand Oaks, CA: Corwin.

Odden, A. R., & Picus, L. O. (2008). *School finance: A policy perspective* (4th ed.). New York,: McGraw-Hill.

Patterson, G.A. (2009, February 2). Schools get creative as big cuts loom: Bigger classes? Four-day weeks? Schools seek ideas from public and staff. *Star Tribune.* Retrieved from http://nl.newsbank.com/

Preston, C. (2012, April 15). Champions of 'small schools' struggles in the wake of Gates Foundation's pullout. *Chronicle of Philanthropy*, *24*(11), 7-8.

Richard, A. (2006, March 22). Rural educators step up Capitol Hill lobbying efforts. *Education Week, 25*(28), 31.

Richard, A. (2004, June 6). Rural schools market selves to survive. *Education Week*, *23*(1), 1-18.

Rural School and Community Trust. (2001). *Rural Policy Matters: A Newsletter of Rural School & Community Action* (collected issues), *3*(1-11). Retrieved from http://files.eric.ed.gov/fulltext/ED459043.pdf

Schulken, M. (2010, August). Rural schools grow leaders to suit needs. *Education Week, 29*(37) 1, 22-23.

Sherard, J. (2014, May 4). USD 489 school board still looking for ways to reduce costs. *The Hays Daily News,* p. A1.

Texas Education Agency (TEA). (2006). *Texas long-range plan for technology 2006-2020: A report to the 80th Legislature from the Texas Education Agency*. Retrieved from www.tea.state.tx.us/index2.aspx?id=5082

Texas Education Agency (TEA). (2012). Retrieved from http://www.tea.state.tx.us

Texas Education Code (TEC). (2014). TEC § 4.01; TEC § 42.101. Retrieved from http://www.statutes.legis.state.tx.us/

Texas Taxpayer & Student Fairness Coal. v. Williams, No. 003130 (250th Dist. Ct., Travis County, Tex. Feb. 4, 2013).

University Interscholastic League (U.I.L.). (2012). Retrieved from http://www.uiltexas.org

U.S. Department of Education (USDE), Office of Educational Technology (2010). *Transforming American education: Learning powered by technology* (National Education Technology Plan). Retrieved from www.ed.gov/techology/netp-2010

Villanueva, C. (2013). *Sizing Up The 2014-15 Texas Budget: Public Education*. Center for Public Policy Priorities (CPPP). Retrieved from http://forabettertexas.org/images/ED_2013_08_PP_publicedbudget.pdf

Watson, S. L., & Reigeluth, C. M. (2008). Community members' perceptions on social, cultural changes and its implication for educational transformation in a small school district community. *Journal of Organisational Transformation & Social Change, 5*(1) 45-65.

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