Accountability Rating and Expenditures: A Three-Year Statewide Study*

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Abstract

In this study, the researchers examined ways in which Texas school districts spent their monies over the past three years. Specifically, we analyzed over three years of data to ascertain the extent to which differences were present in percent expenditures (i.e., central administration, instructional leadership, school leadership, co-curricular/extracurricular activities, and instruction) as a function of the accountability rating received by the school district. In each analysis, controlling for the percent of students who were economically disadvantaged in each district, statistically significant and consistent differences were present across the years of data analyzed. That is, for each of the research questions, school districts spent their monies differently as a function of their accountability rating. Implications of these findings, as well as suggestions for further research, are made.

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1 Introduction

Public schools in American receive funding in three basic ways: local, state, and federal (Guthrie & Reed, 1991). Local and state funds traditionally have been the most common form of funding for schools, with federal government funding being the most difficult to receive (Guthrie & Reed, 1991). State and federal funds offset local revenue disparities, however, state funds typically are not progressive enough and federal funds are not large enough to compensate local inequalities completely (Wilson, Lambright, & Smeeding, 2004). Because education is constitutionally a state responsibility, funding of schools is best addressed at the state level. In Texas, the state of interest in this study, funding can best be understood by looking at what the Texas Education Code stipulates. Stipulated is that public education is a state responsibility and that the state must provide an educational system financed through state revenue sources. The Texas Education Code directs the Texas Commissioner of Education to determine a cost ratio of administrative to instructional expenses and require districts to be in compliance annually (Kemerer & Walsh, 2000). Each student enrolled in the Texas public school system shall have access to programs and services that should be appropriate to the student's educational needs and should be equal to what any other student receives.

At the federal level, funds are provided by the federal government in many different ways. One important method of funding is through Title I which is intended to assist children in high-poverty schools overcome the disadvantages they experience from being raised in poverty. At its inception 40 years ago, Title I was justified as a relentless assault on the school quality side of the educational achievement challenge (Roza, Miller, & Hill, 2005). The Elementary and Secondary Education Act of 1965 would later be the foundation in which No Child Left Behind Act (NCLB) would build upon with its amendment of the act itself (Walsh et al., 2005). Title I funds are a primary tool used for schools and districts throughout the United States. These funds equal about 2% of total spending nationwide (Wilson et al., 2004). Schools depend on the added funding to assist them in working with students who are economically disadvantaged and migrant students, to name a few. Despite the fact that funding for Title I continue to grow, and the program is now the major funding arm of NCLB Act, funds are not always spent in a way likely to accomplish the purposes of the legislation (Roza, Miller, & Hill, 2005).

That is, schools are permitted a great deal of latitude in how they spend these federal dollars. For example, the Hawkins-Stafford Amendments allow Title I money to be used throughout the campus if 75% of students are at or below the poverty level (Wong, 1999). Monies, as long as certain populations are served, may be difficult to trace at the individual campus level. Title I monies are also permitted to be spent on teacher preparation. Some researchers have suggested that much more can be learned about how money affects public schools by looking closely at the practices of schools and school districts (Monk & Rice, 1999).

Moving back to the state level, the current system of funding Texas schools is called the Minimum Foundation Program (Kemerer & Walsh, 2000). This program has formulas that help determine how much money a district should receive. The formulas ensure that children from all districts, rich or poor, are given an adequate amount of money to help in their education. Set up by this program is a foundation level, which sets the amount a district should get, and sets up a contribution level, which is what a district receives in the form of taxes from property value within the district. The amount left, or the difference between the two levels, is what the state provides and is considered state aid.

Though school revenue comes from the contributions of local, state, and federal governments, local governments contribute the largest percentage of the funding for districts (Guthrie & Reed, 1991). For example, for the 2006-2007 academic school year, one school district selected at large, Cypress-Fairbanks Independent School District received 61.1% from their local government, compared with 36.8% from the state of Texas and 2.1% from the federal government as per their district website (Cypress-Fairbanks, 2007). In obtaining their local monies, school districts adopt two tax rates each year. Districts have a Maintenance and Operations tax rate which charges no more than $1.50 per $100.00 of property value (Carroll ISD, 2006). The other tax rate is the Interest and Sinking Fund, which is used when districts are in debt. No more than $.50 can be taxed for $100.00 property value when using this tax method.

In general terms, the federal government usually contributes about 8% of school funding within a Texas school district and provides the least amount of aid as compared to local and state funding (Jehlen, 2003).

For the 2004 fiscal year, the local, state, and federal government provided 43.9%, 47.1 %, and 9.1% of funding respectively (Sable & Hill, 2006). The contributions are split in half. Half of the money (50%) is provided directly to the school district whereas the other 50% is provided to the state or regional education service centers. The money the federal government contributes is usually set aside for either a specific group or for specific programs. With this fact in mind, it appears that the aid that the state contributes is what helps equalize a district so that it can continue to provide services for the children.

2 Finance and Student Performance

The relationship between resources and student performance is still not very clear (Pan, Rudo, Schneider, & Smith-Hansen, 2003). Tajalli and Opheim (2004) showed improved performance at the elementary level when observing expenditures in instructional leadership. They revealed that money used to pay higher teacher salaries in combination with more experience improve the performance of students in poorer schools. In a study by Barth, Haycock, Jackson, Mora, Ruiz, Robinson, and Wilkins (1999), most high poverty schools used a larger amount of district and state funding to support increased professional development thus becoming high performing schools. These schools were able to produce gains in learning that schools in similar positions were unable to accomplish. In a study conducted by Pan et al. (2003), a strong relationship was observed between district resources and student success. High-performing districts showed different resource allocation patterns in specific fiscal and staffing categories than did the low-performing counterparts. Similar results were obvious when districts with strong improvement gains were studied. Improving school districts were comparable to high-performing school districts in resource allocation practices by spending more per pupil instruction and other instructional related areas. Practices such as reallocating administrative and other non-instructional funds to instructional areas were observed throughout the improvement school districts.

Wilson et al. (2004) adjusted expenditures for difference in costs of education and student needs. The authors used a data set for individuals and families instead of using data sets that compare school districts. Descriptive statistics indicated that school expenditures varied based on income, race, and urbanization. Income was a statistically significant predictor of school expenditures across all of their tested specifications except the cost adjustment. Urban area children had lower expenditures per student than suburban or rural area children.

Wenglinsky (1997) stated that fourth and eighth graders math achievement was positively associated with expenditures on instruction and school district administration. Not significantly related were expenditures on facilities, recruitment of highly educated teachers, or school level administration. A number of achievement variables are significantly related to local per pupil expenditures and provide support for the idea that student achievement is related to a school district's financial standing (Napier, 1997). Napier reported that 20 of the 23 achievement variables investigated were significantly correlated with local per pupil expenditures.

Bray (2003) disclosed findings by the Southwest Educational Development Laboratory in which independent school districts in Arkansas, Louisiana, New Mexico, and Texas were studied. Five years of data were used to analyze operating expenditures by function, teacher and administrative staffing, and student test scores. In all four states, patterns existed between the spending of funds on instruction as a share of total expenditures. High performing school districts spent more monies on instruction per pupil and employed more teachers than did their low performing counterparts. Increased math scores in New York were attributed to a greater proportion of total spending dedicated to paraprofessionals (Iatarola, Stiefel, & Schwartz, 2002).

Jacques and Brorsen (2002) stated an additional $1000 per student in instructional expenditures would almost certainly add nearly a point increase in test scores. Such expenditures would focus on teachers, textbooks, and supplies as they were seen to be more productive. In 2004-2005, the average operating expenditure per student in the United States was $8, 208 whereas in Texas it was $7, 335 (Friends of Texas Public Schools, 2008a). Positive yet insignificant factors were workshops, seminars, and computers which is classified as instructional support. Instructional support could potentially aid in teacher productivity, but has been found to be statistically insignificant factors. Schools which spent more money on student support and school administration faired lower on test scores whereas those schools that spent more on instruction had higher scores.

When studying failing schools in Michigan, Anderson and Cotton (2001) found that students in a district that failed to have at least 75% of their high school students meet the basic standards of Michigan were much more likely to be in a high spending district rather than a low spending district. This information highlights that funding is not a determining cause greater student performance. As noted before, funding would seem to have greater significance if the relationship between instruction and non-instructional uses were studied.

3 Accountability Rating

The educational movement in Texas for the past two decades has emphasized school accountability. In the early 1980s, Governor Mark White appointed Ross Perot as the chair for the Select Committee on Public Education, thus beginning the political movement of accountability in Texas. Schools, elementary and secondary alike, all over Texas have felt the impact that such accountability brings with standards-based testing. Taking high-stakes tests, such as the TAKS (Texas Assessment of Academic Skills) or its predecessor, the Texas Assessment of Knowledge and Skills or the TAKS test (TEA, 2006a), has been essential in determining student learning. With the TAKS test came the following school and school district ratings: Academically Unacceptable, Academically Acceptable, Recognized and Exemplary (TEA, 2006b). School districts in Texas attempt to obtain the highest rating possible, not only to be granted more federal money, but also for the status a school district receives as a member of a successful campus. Schools are held accountable not only for the test scores of their students, in aggregate and by subgroup, but also for factors such as student attendance (TEA, 2005). To be considered Exemplary, a school must have no more than 0.2% dropout rate and 90% of the students and subgroups passing TAKS (TEA, 2005).

3.1 Purpose of the Study

The purpose of this study was to explore the relationship between financial variables and the accountability rating received by Texas school districts. In particular, our interest was in determining whether school districts, assigned accountability ratings based primarily on the academic achievement of their students, differed in the manner in which they spent their monies.

3.2 Research Questions

Controlling for the percent of students who are Economically Disadvantaged:

1. What is the difference in percent expenditures by function-central administration as a function of district accountability rating?
2. What is the difference in percent expenditure by function-instructional leadership as a function of district accountability rating?
3. What is the difference in percent expenditure by function-school leadership as a function of district accountability rating?
4. What is the difference in percent expenditure by function-co-curricular/extracurricular activities as a function of district accountability rating?
5. What is the difference in percent expenditure by function-instruction as a function of district accountability?
6. Controlling for percent of Economically Disadvantaged students, what is the difference in percent expenditure by function-instructional related services as a function of district accountability?

4 Method

4.1 Sample

The sample for this study was all school districts in the State of Texas during the years of 2003-2004, 2004-2005, and 2005-2006. Each school district in this study was assigned an accountability rating in each of

these three years: Exemplary; Academically Recognized; Academically Acceptable; and/or Academically Unacceptable. According to the Texas Education Agency (2006d) there were 1,033 school districts in Texas. For the 2003-2004 school year, 18 school districts had a rating of Exemplary, 376 school districts had a rating of Academically Recognized, 711 school districts were Academically Acceptable, and 19 school districts were Academically Unacceptable. For the 2004-2005 school year, the numbers were 11, 172, 910, and 36 respectively. The number of Exemplary school districts decreased from 18 the year before to only 11 whereas the number of Academically Unacceptable school districts increased from 19 to 36, nearly doubling. In the 2005-2006 school year, the number of Exemplary school districts increased to 28, with 335 being Academically Recognized, 730 being Academically Acceptable, and an increase in the number of Academically Unacceptable school districts to 46. Readers should note that in each year of data analyzed that the number of Academically Unacceptable school districts increased.

Texas School Districts by Accountability Rating for the 2003-2004 through 2005-2006 School Years

Accountability Rating	**2003-2004**	**2004-2005**	**2005-2006**
Exemplary	18	11	28
Academically Recognized	376	172	335
Academically Acceptable	711	910	730
Academically Unacceptable	19	36	46

Table 1

4.2 Instrumentation

Data consisted of school district financial expenditures, school district accountability ratings, and the percentage of economically disadvantaged students enrolled in each school district. Data were obtained from the Texas Education Agency Academic Excellence Indicator System (AEIS) database for each of the three years addressed in this investigation. The AEIS database annually provides a broad range of information on the performance of students in each school district and campus within Texas. Some of the data included in this database are student demographics, staff demographics, academic performance, and organizational, financial and personnel information (TEA, 2003b).

Six separate measures of how monies were spent were obtained: (a) percentage of monies spent on central administration; (b) percent expenditure of monies for instructional leadership; (c) percent of monies spent on school leadership; (d) percentage of monies spent on co-curricular/extracurricular activities; (e) percentage of monies spent on instruction was determined; and, (f) percent expenditure of monies for instructional-related purposes. These dependent variables were selected for the following reasons.

First, it is important to study in detail the percentage of expenditures within the central administration. The larger portion of money being spent should be within the instructional function rather than the non-instructional functions being listed. Second, the percentage of expenditures within the instructional leadership function involves the managing, directing, supervising, and providing leadership for staff who provide instructional services. Third, the school leadership percentage of expenditures depicts leadership activities involved with the directing and managing of a campus. Fourth, the co-curricular/extracurricular activities percent was analyzed to observe how much is being spent on such activities. The activities are school-sponsored activities during or after the school day that are not essential to the delivery of instructional services. Next, instructional expenditures are monies spent on activities dealing directly with the interaction between teachers and students, including instruction aided with computers. Finally, the percentages of instructional related service expenditures include educational resources and media for resource centers and libraries, curriculum development, and instructional staff development.

Along with these dependent variables, data were collected on the percentage of students who were economically disadvantaged within each school district. Because school districts with high concentrations of economically disadvantaged students may spend their monies in different ways than school districts that have few economically disadvantaged students, we viewed it as important to control for this variable.

4.3 Procedures

Data were downloaded from the AEIS database for each of the three years in this study. School district accountability ratings were obtained for each year as well as the following dependent variables: percent expenditure by function-central administration; percent expenditure by function-instructional leadership; percent expenditure by function-school leadership; percent expenditure by function-co-curricular/extracurricular activities; percent expenditure by function-instruction; and percent expenditure by function-instructional-related services. A separate database was generated for each year because the accountability rating received by school districts can change from year to year. Data, downloaded from the AEIS database, were in an Excel format that was then converted into a format suitable for the Statistical Package for the Social Sciences-PC (SPSS-PC Version 13.1). In each of the three data files, school district accountability rating was the independent variable with four groups. The other variables served either as dependent variables in statistical analyses or as controlling variables.

5 Results

In each of the research questions, the relationships between school finance with school district accountability rating were investigated. Because student demographic characteristics influence how school monies are spent, all statistical analyses were controlled for student demographics. Thus, for all research questions, analysis of covariance (ANCOVA) procedures were performed. The independent variable in each of the questions was the school accountability rating, which consists of four groups and the dependent variable was a specific school finance variable. The ANCOVA method of statistical analysis was selected because it is capable of removing the obscuring effects of pre-existing individual differences among participants. An ANCOVA benefits when a comparison of mean achievement gain scores of different groups because it permits one to attribute gains to the effect of a technique rather than to initial scores (Gall, Gall, & Borg, 2003). Given that the percentage of economically disadvantaged students differs by school district and that the achievement of economically disadvantaged students tend to be lower than the achievement of students who are not economically disadvantaged, controlling for this variable should assist in removing any differences in how monies are spent as a function of economically disadvantaged student percentage. Before statistical procedures were conducted, data were examined to make sure that all data were congruent with assumptions under ANCOVA.

5.1 Percent Expenditure by Central Administration

To determine whether a statistically significant difference was present between school district accountability rating and percent expenditure on central administration (research question one) for all Texas school districts, an ANCOVA procedure was conducted for each of the three years, with accountability rating being the independent variable and percent expenditure by function-central administration being the dependent variable. Descriptive statistics, adjusted means, are presented in Table 2.

Adjusted Means for Central Administration Expenditures by Academic Rating and Study

Year

2003-2004	**M**	**Standard Error**
Exemplary	11.04	0.92
Recognized	6.88	0.21
Academically Acceptable	5.56	0.15
Academically Unacceptable	15.18	0.90
2004-2005		
Exemplary	12.29	1.19
Recognized	8.00	0.31
Academically Acceptable	6.32	0.13
Academically Unacceptable	11.72	0.67
2005-2006		
Exemplary	11.04	0.95
Recognized	7.62	0.23
Academically Acceptable	6.00	0.15
Academically Unacceptable	10.21	0.60

Table 2

For the 2003–2004 academic year, a statistically significant difference was present, F (3, 1119) = 53.17, MSE = 15.15, $p < .001$, in percent expenditure by central administration among the school district accountability ratings. The effect size was small, 13% (Cohen, 1988). The Academically Unacceptable school districts had the largest adjusted mean (M = 15.18) and the Academically Acceptable districts had the lowest adjusted mean with (M = 5.56).

For the 2004–2005 academic year, a statistically significant difference was present, F (3, 1124) = 36.14, MSE = 15.32, $p < .01$. This result also supported that the percent expenditure by central administration varied as a function of school district accountability rating. The accountability factor accounted for 9% of the variance of the dependent variable, a small effect size (Cohen, 1988). The Exemplary school districts had the largest adjusted mean (M = 12.29) and the Academically Acceptable districts had the lowest adjusted mean with (M = 6.32).

For the 2005–2006 academic year, an ANCOVA revealed that a statistically significant difference was present, F (3, 1124) = 31.95, MSE = 16.13, $p < .01$. A difference was present in percent expenditure by central administration as a function of the level of the accountability rating received by the school district. The strength of relationship between the accountability rating and percent expenditure by central administration was small, .08, as assessed by partial eta square (n^2). The Exemplary school districts had the largest adjusted mean (M = 11.04) and the Academically Acceptable districts had the lowest adjusted mean with (M = 6.0).

Results were congruent across the three years of the AEIS database. That is, statistically significant differences of the same magnitude were present among the four levels of district accountability ratings during the three academic years. It is important to note that in all three academic years that were reviewed, Academically Acceptable school districts had the lowest adjusted mean when compared to the other school districts. Recognized and Academically Acceptable districts were the lowest all three years while Exemplary school districts had the highest mean during the last two years.

5.2 Percent Expenditures by Instructional Leadership

To determine whether a statistically significant difference was present between school district accountability rating and percent expenditure by instructional leadership (research question two) for all school districts in the State of Texas, an ANCOVA procedure was conducted for each of the three years, with accountability rating being the independent variable and percent expenditure by instructional leadership being the dependent variable. Descriptive statistics are depicted in Table 3.

Adusted Means for Instructional Leadership Expenditures by Academic Rating and Study Year

2003-2004	**M**	**Standard Error**
Exemplary	0.43	0.21
Recognized	0.47	0.05
Academically Acceptable	0.85	0.03
Academically Unacceptable	0.73	0.20
2004-2005		
Exemplary	0.42	0.33
Recognized	0.67	0.08
Academically Acceptable	1.00	0.04
Academically Unacceptable	0.85	0.18
2005-2006		
Exemplary	0.17	0.25
Recognized	0.70	0.06
Academically Acceptable	1.11	0.04
Academically Unacceptable	0.61	0.16

Table 3

For the 2003–2004 academic year, a statistically significant difference was present, F (3, 1119) = 14.87, MSE = .76, p < .001, in the percent expenditure by instructional leadership as a function of the level of the accountability rating received by the school district. The strength of relationship between the accountability rating and percent expenditure by function-instructional leadership was small, n^2, at .04 (Cohen, 1988). Academically Acceptable school districts had the largest adjusted mean (M = 0.85) and the Exemplary districts had the lowest adjusted mean with (M = 0.43).

The same statistical procedure, an ANCOVA, was repeated for the 2004 – 2005 school year. For the 2004–2005 academic year, a statistically significant difference was present, F (3, 1124) = 5.5, MSE = 1.16, p < .01. This result also reflected that the percent expenditure by instructional leadership varied as a function of school district accountability rating, albeit a very small effect size, .01 (Cohen, 1988). Academically Acceptable school districts had the largest adjusted mean (M = 1.00) and the Exemplary districts had the lowest adjusted mean with (M = 0.42).

Concerning the 2005–2006 academic year, the ANCOVA revealed that a statistically significant difference was present, F (3, 1124) = 15.53, MSE = 1.16, p < .001, n^2= .04, in the percent expenditure by instructional leadership as a function of the level of the accountability rating received by the school district. The strength of relationship between the accountability rating and percent expenditure by function-instructional leadership was small (Cohen, 1988). Academically Acceptable school districts had the largest adjusted mean (M = 1.11) and the Exemplary districts had the lowest adjusted mean with (M = 0.17).

Similar to the first research question, the results were commensurate across the three years of the AEIS database. Statistically significant differences were present among the four levels of district accountability ratings during the three academic years. Exemplary school districts had the lowest mean every year whereas Academically Acceptable districts had the highest mean. Thus, Exemplary school districts were more likely to spend a lower amount of funds on instructional leadership than were Academically Acceptable districts.

5.3 Percent Expeditures by Function-School Leadership

To determine whether a statistically significant difference was present between school district accountability rating and percent expenditure by school leadership (research question three) for all school districts in the State of Texas, an ANCOVA procedure was conducted for each of the three years, with accountability rating being the independent variable and percent expenditure by function-school leadership being the dependent variable. Descriptive statistics are shown in Table 4.

Adjusted means for School Leadership by Academic Rating and Study Year

2003-2004	**M**	**Standard Error**
Exemplary	5.67	0.37
Recognized	4.87	0.08
Academically Acceptable	4.97	0.06
Academically Unacceptable	7.13	0.36
2004-2005		
Exemplary	4.20	0.57
Recognized	5.45	0.15
Academically Acceptable	5.50	0.06
Academically Unacceptable	7.61	0.32
2005-2006		
Exemplary	5.09	0.42
Recognized	5.47	0.10
Academically Acceptable	5.49	0.07
Academically Unacceptable	7.19	0.27

Table 4

Concerning the 2003–2004 academic year, a statistically significant difference was present, F (3, 1119) = 13.28, MSE = 2.47, $p < .001$, $n^2 = .03$, in the percent expenditure by school leadership as a function of the level of the accountability rating received by the school district. The strength of relationship between the accountability rating and percent expenditure by function-school leadership was small (Cohen, 1988). Academically Unacceptable school districts had the largest adjusted mean (M = 7.13) and the Recognized districts had the lowest adjusted mean with (M = 4.87).

The same statistical procedure, an ANCOVA, was repeated for the 2004 – 2005 school year. For the 2004–2005 academic year, a statistically significant difference was present, F (3, 1124) = 15.98, MSE = 3.47, $p < .01$, $n^2 = .04$. This result also reflected that the percent expenditure by school leadership varied as a function of school district accountability rating. Academically Unacceptable school districts had the largest adjusted mean (M = 7.61) and the Exemplary districts had the lowest adjusted mean with (M = 4.20).

Regarding the 2005–2006 academic year, an ANCOVA revealed that a statistically significant difference was present, F (3, 1124) = 13.12, MSE = 3.23, $p < .01$, $n^2 = .03$, in the percent expenditure by school leadership as a function of the level of the accountability rating received by the school district. The strength of relationship between the accountability rating and percent expenditure by function-school leadership was small (Cohen, 1988). Academically Unacceptable school districts had the largest adjusted mean ($M = 7.19$) and the Exemplary districts had the lowest adjusted mean with ($M = 5.09$).

Results were quite similar across the three years of the AEIS database. Statistically significant differences were present among the four levels of district accountability ratings during the three academic years. Interestingly, Academically Unacceptable school districts had the highest mean showing that more money was used in school leadership than in the other districts. During the last two years studied, Exemplary and Recognized school districts had the lowest mean with Exemplary being the lowest in both years. Thus, fewer dollars were spent on school leadership in Exemplary and Recognized districts when compared to the other rated districts.

5.4 Percent Expenditure by Co-Curricular/Extracurricular Activities

To determine whether a statistically significant difference was present between school district accountability rating and percent expenditure by co-curricular/extracurricular activities (research question four) for all school districts in the State of Texas, an ANCOVA procedure was conducted for each of the three years, with accountability rating being the independent variable and percent expenditure by function-co-curricular/extracurricular activities being the dependent variable. Adjusted means are depicted in Table 5.

Adjusted Means for Co-curricular/Extra-curricular Expenditures by Academic rating and Study Year

2003-2004	**M**	**Standard Error**
Exemplary	1.49	.35
Recognized	3.28	.08
Academically Acceptable	3.06	.06
Academically Unacceptable	.74	.35
2004-2005		
Exemplary	1.32	.50
Recognized	3.57	.13
Academically Acceptable	3.52	.06
Academically Unacceptable	1.37	.28
2005-2006		
Exemplary	1.94	.40
Recognized	3.63	.09
Academically Acceptable	3.58	.06
Academically Unacceptable	2.43	.25

Table 5

Regarding the 2004–2005 academic year, a statistically significant difference was present, F (3, 1124) = 25.64, MSE = 2.71, $p < .01$, $n^2 = .06$. This result also reflected that the percent expenditure by co-curricular/extracurricular activities varied as a function of school district accountability rating. Recognized

school districts had the largest adjusted mean ($M = 3.57$) and the Exemplary districts had the lowest adjusted mean ($M = 1.32$).

For the 2005–2006 academic year, an ANCOVA revealed that a statistically significant difference was present, F (3, 1124) = 12.32, $MSE = 2.81$, $p < .001$, $n^2 = .03$, in the percent expenditure by co-curricular/extracurricular activities among accountability ratings. The strength of relationship between the accountability rating and percent expenditure by function-co-curricular/extracurricular activities was small (Cohen, 1988). Recognized school districts had the largest adjusted mean ($M = 3.63$) and the Exemplary districts had the lowest adjusted mean with ($M = 1.94$).

Results, across the three years of the AEIS database, were commensurate. Statistically significant differences were present among the four levels of district accountability ratings during the three academic years. The lowest adjusted mean the last two years was found within Exemplary school districts. It is interesting to note that Recognized districts had the highest adjusted mean in all three years being studied.

5.5 Percent Expenditure by Instruction

To determine whether a statistically significant difference was present between school district accountability rating and percent expenditure by instruction (research question five) for all school districts in the State of Texas, an ANCOVA procedure was conducted for each of the three years, with accountability rating being the independent variable and percent expenditure by function-instruction being the dependent variable. Adjusted means are shown in Table 6.

Adjusted Means for Instruction Expenditures by Academic Rating and Study Year

2003-2004	**M**	**Standard Error**
Exemplary	49.50	1.39
Recognized	51.18	0.31
Academically Acceptable	51.27	0.22
Academically Unacceptable	45.46	1.36
2004-2005		
Exemplary	57.06	1.46
Recognized	56.07	0.38
Academically Acceptable	56.65	0.16
Academically Unacceptable	50.28	0.83
2005-2006		
Exemplary	54.90	1.16
Recognized	55.61	0.28
Academically Acceptable	56.39	0.18
Academically Unacceptable	52.23	0.74

Table 6

Regarding the 2003–2004 academic year, a statistically significant difference was present, F (3, 1119) = 6.44, $MSE = 34.51$, $p < .01$, $n^2 = .02$, in the percent expenditure by instruction as a function of the level of the accountability rating received by the school district. The strength of relationship between the accountability rating and expenditure by instruction was small (Cohen, 1988). Academically Acceptable

school districts had the largest adjusted mean ($M = 51.27$) and the Academically Unacceptable districts had the lowest adjusted mean ($M = 45.46$).

Concerning the 2004–2005 academic year, a statistically significant difference was present, F (3, 1124) = 19.75, $MSE = 23.33$, $p < .01$, $n^2 = .05$. This result also reflected that the percent expenditure by instruction varied as a function of school district accountability rating. Exemplary school districts had the largest adjusted mean ($M = 57.06$) and Academically Unacceptable districts had the lowest adjusted mean ($M = 50.28$).

For the 2005–2006 academic year, an ANCOVA revealed that a statistically significant difference was present, F (3, 1124) = 11.54, $MSE = 24.18$, $p < .01$, $n^2 = .03$. The strength of relationship between the accountability rating and percent expenditure by instruction was small. Academically Acceptable school districts had the largest adjusted mean ($M = 56.39$) and the Academically Unacceptable districts had the lowest adjusted mean ($M = 52.23$).

Results were commensurate across the three years of the AEIS database. Statistically significant difference was present among the four levels of district accountability ratings during the three academic years. In all three years being studied, Academically Unacceptable school districts had the lowest adjusted mean of all four rated groups. This finding signifies that as a group, less money was utilized for instruction expenditures in Academically Unacceptable districts than in the other three rated groups.

5.6 Percent Expenditure by Instructional Related Services

To determine whether a statistically significant difference was present between school district accountability rating and percent expenditure by instructional related services (research question six) for all school districts in the State of Texas, an ANCOVA procedure was conducted for each of the three years, with accountability rating being the independent variable and percent expenditure by instructional related services being the dependent variable. Adjusted means are present in Table 7.

Adjusted Means for Instructional Related Services Expenditures by Academic Rating and Study Year

Rating by Academic Year	M	Standard Error
2003-2004		
Exemplary	3.07	.30
Recognized	2.39	.07
Academically Acceptable	2.50	.05
Academically Unacceptable	1.61	.29
2004-2005		
Exemplary	3.34	.50
Recognized	2.60	.13
Academically Acceptable	2.70	.05
Academically Unacceptable	2.42	.28
2005-2006		
Exemplary	2.06	.38
Recognized	2.69	.09
Academically Acceptable	2.77	.06
Academically Unacceptable	2.03	.24

Table 7

For the 2003–2004 academic year, a statistically significant difference was present, $F(3, 1119) = 4.86$, $MSE = 1.60$, $p < .01$, $n^2 = .01$, in the percent expenditure by instructional related services as a function of the level of the accountability rating received by the school district. The strength of this relationship was small (Cohen, 1988). Exemplary school districts had the largest adjusted mean ($M = 3.07$) and Academically Unacceptable districts had the lowest adjusted mean ($M = 1.61$).

Regarding the 2004–2005 academic year, no statistically significant difference was present, $F(3, 1124) = 1.09$, $MSE = 2.67$, $p = .35$. This finding, unlike the previous year, indicated that the percent expenditure by instructional related services did not vary as a function of school district accountability rating. Exemplary school districts had the largest adjusted mean ($M = 3.34$) and the Academically Unacceptable districts had the lowest adjusted mean ($M = 2.42$).

Concerning the 2005–2006 academic year, the ANCOVA revealed that a statistically significant difference was present, $F(3, 1124) = 3.90$, $MSE = 2.65$, $p < .01$, $n^2 = .01$. The strength of relationship between the accountability rating and percent expenditure by instructional related services was small (Cohen, 1988). Academically Acceptable school districts had the largest adjusted mean ($M = 2.77$) and the Academically Unacceptable districts had the lowest adjusted mean with ($M = 2.03$).

Results were not as consistent for this research question as for the previous five questions. One of the three years of data analyzed for this research question did not yield a statistically significant result. The $2003 - 2004$ and $2005 - 2006$ academic years showed consistent levels of statistical significance unlike the $2004 - 2005$ academic year. In all three years being studied, Academically Unacceptable school districts had the lowest adjusted mean of all four rated groups. This finding is interpreted that, as a group, less money is utilized for instructional related services expenditures in Academically Unacceptable districts than in the other three rated groups.

6 Discussion

In this investigation, six research questions were addressed and repeated for three years of data. The three years of data were collected from the Texas Education Agency Academic Excellence Indicator System website. For all of the research questions, with one exception for one year of analysis, differences were yielded in the ways in which school districts spent their monies for central administration, instructional leadership, school leadership, co-curricular/extracurricular activities, instruction, and instructional related services among the four accountability ratings. For each of the research questions, the magnitude, sign, and effect size of the statistically significant differences were similar across the years of data analyzed.

Percent expenditure by instructional related services was the only variable on which inconsistent results were obtained. The $2004 - 2005$ school year financial data indicated that the school districts did not differ in how they spent their instructional related services monies, however, differences were present for the other two years of data. Of particular interest is our finding that Academically Unacceptable school districts spent significantly less of their monies on instruction than did the other three groups of school districts.

School finance variables influence school districts daily and are two critical components that focus on important aspects of education. It is critical to identify financial factors that help promote successful learning and produces student achievement in multiple areas. School districts with different accountability ratings appear to spend their monies in different ways. The intent of these researchers was to determine if, when student demographic characteristics were controlled for in statistical analyses, school districts with better accountability ratings spent their monies in different ways than school districts with poorer accountability ratings. As such, this information could be useful in determining if the ways in which school monies were spent could aid in the success of a school when working with high populations of at-risk, low-income, minority children.

This study has contributed a unique method of research in that data were analyzed of Texas school districts for three years (2003-2004, 2004-2005, and 2005-2006) when studying the relationship between accountability ratings and a variety of staff and finance factors. This study built on current knowledge and

practice by school districts, but unlike other studies, a study of the three consecutive years mentioned was not available in regard to the factors being studied. Most of the data analyzed supported a much more deserving need to analyze staff and finance variables when planning for success.

The findings presented allow further insight into finance factors and the impact they have on district accountability in the State of Texas. The study was intended to provide information that could be useful to school and district administrators, school districts, policy makers within a school district and federal level and universities. The findings specifically targeted school district administrators and campus level administrators.

Support may be needed for school district administrators and campus administrator leaders working in districts with large concentrations of economically disadvantaged students among other populations. Another recommendation would be to spend less money on school leadership and make districts less top heavy or less inflated at the higher echelon of school district administration. Findings reported that Academically Unacceptable school districts spent more money on average on school leadership than did school districts in the other three categories. Redirecting funds to other areas such as instruction may reveal added benefits to student performance. Another important finding is that the Academically Unacceptable school district category on average spent less funding on instruction than did the other three accountability groups. These issues must be addressed and reviewed at the district and campus levels. Such information could possibly help Academically Unacceptable school districts with the issue of higher student performance and the methods used to achieve student success.

Lest readers overgeneralize from these findings, several caveats are in order. The research findings present in this study are pertinent to the State of Texas for the three years of data analyzed. The extent to which these findings generalize to other states is unknown. Second, no clear picture exists regarding the relationship between the manner in which school dollars are spent and student achievement. Though statistically significant differences were yielded in how these school districts spent their monies, no cause-and-effect relationship is present. That is, though causal-comparative research studies such as this one, no cause-and-effect relationship can be determined. Thus, though a relationship was demonstrated between school district accountability rating and the ways in which these school districts spent their monies, more research is needed to determine any causative factors.

Clearly, more research studies are needed in this area. One such study we suggest is an in-depth qualitative study of the 10 most successful school districts and the 10 least successful school districts, at each individual state, to determine the ways in which they spent their monies and the rationale behind the allocation of these dollars. A similar study of the top school districts with high percentages of economically disadvantaged students and of the poorest school districts with similar percentages of economically disadvantaged students could be conducted. What is needed is a deeper understanding of the ways in which dollars are allocated and spent. Until such time as studies such as this one are replicated, readers are urged to be cautious in their reliance upon our findings.

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