

**UMT Education Review (UER)**

**Volume 5 Issue 2, Fall 2022**

ISSN(P): 2616-9738, ISSN(E): 2616-9746

Homepage: <https://journals.umt.edu.pk/index.php/uer>



Article QR



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**DOI:** <https://doi.org/10.32350/uer.52.02>

**History:** Received: May 26, 2022, Revised: October 12, 2022, Accepted: December 19, 2022, Publication Date: December 19, 2022

**Citation:** Merik, T. M., & Slate, J. R. (2022). Instructional leadership expenditures at texas schools: A multiyear, statewide analysis. *UMT Education Review*, 5(2), 22-45. <https://doi.org/10.32350/uer.52.02>

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**Conflict of Interest:** Author(s) declared no conflict of interest



**UMT**

A publication of

Department of Education, School of Social Sciences and Humanities  
University of Management and Technology, Lahore, Pakistan

# **Instructional Leadership Expenditures at Texas Schools: A Multiyear, Statewide Analysis**

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## **Abstract**

This study was conducted to determine the degree to which differences were present in the distribution of Instructional Leadership dollars spent per student at the elementary, middle, and high school levels for the 2009-2010 through the 2018-2019 school years in Texas. Texas statewide data for all public schools were obtained from the Texas Education Agency. Because archival data were analyzed, a causal-comparative research design was present. To determine whether statistically significant differences were present in Instructional Leadership dollars spent by school level, inferential statistical procedures were calculated for each school year. Statistically significant differences were established for each school year. The amount of Instructional Leadership dollars spent per pupil were highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. From the 2009-2010 school year through the 2018-2019 school year, expenditures for elementary, middle, and high schools across the State of Texas increased by only \$42, \$40, and \$48, respectively. As such, the Instructional Leadership funding did not keep up with the rate of inflation in this time period. Implications and recommendations for future research were discussed.

**Keywords:** instructional leadership, funding; financial expenditures, Texas education agency, trend

## **Introduction**

In the current era of holding schools accountable for student learning through the use of high-stakes testing, school leaders have focused on increasing teacher effectiveness and quality (Synar & Maiden, [2012](#)). In 2019, this greater focus on teacher quality and effectiveness was emphasized by the Texas Education Agency's implementation of a revised set of criteria in regard to the state's principal certification requirements (Texas Education Agency, [2021](#)). The focus of the role of the school

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principal is now that of an instructional leader (Texas Education Agency, [2021](#)). A commonly utilized strategy to improve teacher effectiveness is through instructional leadership or professional development. The Texas Education Agency ([2019](#)) defines costs and activities associated with instructional leadership as the “managing, directing, supervising, and providing leadership for staff who provide either instructional or instruction-related services” (p. 7). Hence, in this article, *professional development* and *instructional leadership* will be used interchangeably.

With an increasing focus on professional development, it is important to note that researchers (Foster et al., [2013](#); Harris & Sass, [2011](#); Jacob & Lefgren, [2004](#)) have established that the influence of professional development on student outcomes, if able to be quantified at all, has had either only some positive effects or no effect at all on student achievement. In one such study, Foster et al. ([2013](#)) examined the effectiveness of a professional development training program on the mathematics and science outcomes of students. Foster et al. ([2013](#)) determined that the professional development was effective for only instruction in mathematics for student outcomes in middle school. The professional development program, however, was not effective for science and was also not effective at the elementary and high school levels. As a result, the effectiveness of the professional development program varied by both content area and school level (Foster et al., [2013](#)). The Results of Foster et al. ([2013](#)) were congruent with the findings of other researchers (e.g., Harris & Sass, [2011](#); Jacob & Lefgren, [2004](#)) who also established that professional development programs had mixed results, or no observable effects, on student academic achievement.

Many researchers (Birman et al., [2000](#); Gallagher, [2002](#); Killeen et al., [2002](#); Knight, [2007](#), [2011](#), [2018](#)) agree that on-going professional development for instruction is necessary to help improve student achievement. Due to the ongoing prevalence of professional development, it is worth noting some key research investigations in which researchers (Hertert, [1997](#); Killeen et al., [2002](#); Miles et al., [2004](#); Odden et al., [2002](#)) have analyzed the costs of professional development using different financial expenditure formats and methodologies. Hertert ([1997](#)) examined data from 16 school districts and documented that school district spending on professional development varied greatly between 1.7% and 7.6%, with an average of about 3.6% of a school district’s net operating expenditures.

In an investigation of national professional development expenditures, Killeen et al. (2002) established that school districts ranged from about 1.5% to about 8% of the general school district expenditures spent on professional development/instructional improvement. On average, other researchers (Miles et al., 2004; Odden et al., 2002) have documented that most school districts spend about 3% to 5% of their total budgets on teacher professional development.

Although a number of studies (Hertert, 1997; Killeen et al., 2002; Miles et al., 2004; Odden et al., 2002) are present in the research literature on the cost of teacher professional development, these studies are dated. Moreover, these researchers had not investigated trends in the costs associated with instructional leadership or professional development, on a statewide basis, or by school levels. Notably, previous researchers (Hertert, 1997; Killeen et al., 2002; Miles et al., 2004; Odden et al., 2002) had difficulties quantifying and generalizing the true expense of professional development because of variances in accounting codes and definitions of what professional development entails (Gallagher, 2002). Hence, it is difficult to generalize the results from the aforementioned studies because of inconsistencies in accounting codes and differing definitions for professional development.

In the past decade, educational leaders have come to the realization that occasional professional development for instruction is insufficient (Knight, 2007, 2011, 2018). As a result, many schools and school districts have created full-time professional positions such as content coaches, skills specialists, instructional coaches, and subject area coordinators that are housed at specific campuses along with similar positions at the district level (Knight, 2007, 2011, 2018; Moody, 2019). These instructional supervisors serve to support teachers throughout the school year by modeling lessons, assisting with lesson planning, and providing professional development for the instructional staff, among other responsibilities (Knight, 2007, 2011, 2018).

With the creation of instructional coaching/supervisor positions, and hence the on-going professional development of teachers, it is reasonable to question if student test scores have also increased. According to the National Assessment of Educational Progress (2021), Texas, the state of interest for this article, has experienced minimal gains, if any, in the reading and mathematics scores of their Grade 4 and Grade 8 students. According

to the National Assessment of Educational Progress ([2021](#)), 39.02% of Grade 4 students in Texas tested proficient in mathematics in 2011 and 43.67% were proficient in 2019. Regarding Grade 4 reading, 28.27% of students tested proficient in 2011 and 30.27% were proficient in 2019. For Grade 8, 40.01% were proficient in mathematics in 2011 and 29.55% were proficient in 2019. With respect to Grade 8 reading, 26.52% of students were proficient in 2011 compared to 25.04% of students in 2019 (National Assessment of Educational Progress, [2021](#)). In summary, Grade 4 mathematics scores increased by 4.65% and reading scores increased by 2%. However, Grade 8 mathematics scores decreased by 10.46% and reading scores decreased by 1.48% from 2011 to 2019 (National Assessment of Educational Progress, [2021](#)).

From an educational leadership perspective, school and school district leaders know the importance of quality and effective teachers and the positive influence they can have on students and their academic performance (Marzano, [2003](#), [2017](#); McCaffrey et al., [2003](#)). Due to limited funds, school and school district leaders must make difficult decisions on how best to allocate resources in hopes of maximizing student achievement and overall well-being. In short, school and school district leaders must decide how and where they can best target resources to produce the greatest influence on student success. Providing additional teacher training by increasing instructional leadership is one such avenue. Increasing student support services such as school counseling and social work, are other avenues. For school and school district leaders, finding a balance, or just the right combination of these services and other ones is a challenge in today's high-stakes testing environment.

### **Statement of the Problem**

Researchers (Hertert, [1997](#); Killeen et al., [2002](#); Miles et al., [2004](#); Odden et al., [2002](#)) have documented that school district expenditures on instructional leadership vary from about 1.5% to 8% of a school district's budget, with many school districts averaging about 3% to 5%. Although a 1% difference in expenditure may appear small, this difference could be a difference of hundreds of thousands of dollars or even millions of dollars in expenditures among school districts (Hertert, [1997](#); Killeen et al., [2002](#); Miles et al., [2004](#); Odden et al., [2002](#)). With both federal and state governments continuing to focus on test scores as the main measure of school accountability, schools and school districts have increasingly used

instructional leadership as a method to increase teacher quality and effectiveness (Birman et al., [2000](#); Gallagher, [2002](#); Killeen et al., [2002](#); Knight, [2007](#), [2011](#), [2018](#); Moody, [2019](#)).

However, though logical that increased instructional leadership should lead to improvement in instruction quality, and therefore, an improvement in student outcomes, a number of researchers (e.g., Foster et al., [2013](#); Harris & Sass, [2011](#); Jacob & Lefgren, [2004](#)) have documented mixed results in regard to the effectiveness of professional development. Furthermore, according to the National Assessment of Educational Progress ([2021](#)), Texas students have not exhibited consistent growth in academic achievement. Instructional leadership is just one strategy to improve student academic achievement. However, other options, such as school counseling services and school social work services, have been established to improve student outcomes (Alvarez et al., [2013](#); Bryan et al., [2011](#); Cholewa et al., [2015](#); Elsherbiny, [2017](#); Franklin et al., [2009](#); Hurwitz et al., [2014](#); Jones et al., [2019](#); Newsome et al., [2008](#)). With limited funding, schools and school districts must carefully consider how best to allocate funding towards various school programs with respect to the programs' cost-effectiveness. Therefore, it is imperative that the spending habits of schools, as it relates to instructional leadership, must be evaluated to assess what trends, if any, are present.

### **Purpose of the Study**

Three purposes were present in this article. The first purpose was to determine the monies spent for Instructional Leadership per pupil in real dollars and as a percent of the total monies at Texas elementary, middle, and high schools. The second purpose in this study was to ascertain the degree to which differences might be present in the monies spent and as a percent of the total monies per pupil for Instructional Leadership between the elementary, middle, and high schools. The third purpose was to determine the extent to which trends might exist in monies spent and as a percent of monies spent at all three school levels across the 2009-2010 school year through the 2018-2019 school year.

### **Significance of the Study**

In the current era of high-stakes testing, school district leaders have increased their focus on instructional leadership as a strategy to increase student test scores (Knight, [2007](#), [2011](#), [2018](#); Moody, [2019](#)). As school

districts allocate more resources towards instructional leadership, resources for student wraparound services that seek to address the needs of the whole child, such as school counseling and school social work, may become more deprioritized. Although articles have been published on assessing the costs of instructional leadership, no published studies could be located in which the trends of instructional leadership expenditures, on a statewide basis, and by school level were examined. Results from this research study contributes to the existing research literature regarding funding for instructional leadership services and can be used by school and school district leaders, as well as by state lawmakers in making decisions regarding future funding for instructional leadership services, and the cost-effectiveness of its various programs.

### **Research Questions**

The following research questions were addressed in this study: (a) What are the monies spent for Instructional Leadership per pupil in real dollars and as a percent of the total monies in the 2009-2010 school year for Texas elementary schools?; (b) What are the monies spent for Instructional Leadership per pupil in real dollars and as a percent of the total monies in the 2009-2010 school year for Texas middle schools?; (c) What are the monies spent for Instructional Leadership per pupil in real dollars and as a percent of the total monies in the 2009-2010 school year for Texas high schools?; (d) What is the difference in monies spent per pupil for Instructional Leadership between the elementary, middle, and high school levels for the 2009-2010 school year in Texas?; (e) What is the difference in the percent of total monies spent for Instructional Leadership between the elementary, middle, and high schools levels for the 2009-2010 school year in Texas?; and (f) What is the trend in monies spent for Instructional Leadership for each of these school levels per pupil in real dollars and as a percent of the total monies across the 2009-2010 and 2018-2019 school years for Texas schools? The first five research questions were answered separately for the 2009-2010 school year through the 2018-2019 school year, whereas the last question constituted all of these school years.

### **Method**

#### **Research Design**

A causal-comparative research design was present in this study (Johnson & Christensen, [2020](#)). This design was present due to the use of

pre-existing data which were obtained from the Texas Education Agency. With respect to this investigation, an advantage of utilizing a causal-comparative research design is the ability to analyze already existing statewide data that were obtained from the Texas Education Agency's Public Education Information Management System. However, using a causal-comparative research design does not allow definitive cause and effect relationship statements (Johnson & Christensen, [2020](#)) because the independent variable and the dependent variables have already occurred. Consequently, definitive conclusions regarding any statistically significant differences could not be made.

In this study, Texas public elementary, middle, and high schools for the 2009-2010 school year through the 2018-2019 school year were the independent variables. The monies spent for Instructional Leadership per pupil in real dollars and as a percent of the total monies at each school level during the aforementioned 10 school years were the dependent variables. The financial expenditures data were previously obtained through a Public Information Request form submitted to and fulfilled by the Texas Education Agency's Public Education Information Management System. The Texas Education Agency's Public Education Information Management System collects and organizes data on all public schools and districts in Texas, including financial expenditures, enrollment, and student/staff demographics, among numerous other characteristics related to the daily activities of Texas public education (Texas Education Agency, [2018](#)).

### **Participants and Instrumentation**

Schools participating in this study were traditional public elementary, middle, and high schools in Texas. An excess of 3,000 elementary schools consisting of Grades Pre-Kindergarten through 5 herein had their data analyzed. About 1,000 middle schools with Grades 6 through 8 were included in this analysis. With respect to high schools, approximately 1,000 were included in this investigation and were made up of Grades 9 through 12. Charter and private schools were not included in this investigation due to differences in how their funding is allocated. Moreover, non-traditional schools such as K-8 or Grade 9 centers were also not included in this research investigation. These exclusions occurred so that the school levels could be compared on an equitable manner.



Specifically, the amount of monies spent on Instructional Leadership per student and as a percent of total monies at each school level across the 10 school years, 2009-2010 through 2018-2019, were analyzed. Data from these years were used because they were the most recent data available at the time this research investigation was conducted. The pandemic years involved substantial changes in funding as funding was shifted to areas such as long distance learning and online learning, rather than the traditional face-to-face instruction. As such, funding in particular categories in the pandemic years would have been substantially different from the funding in the pre-pandemic years.

According to the Texas Education Agency (2019, p. 7), Instructional Leadership Expenditures comprise of expenditures used for “managing, directing, supervising, and providing leadership for staff who provide either instructional or instruction-related services (function code 21).” The financial expenditures data were previously obtained through a Public Information Request that was submitted to and fulfilled by the Texas Education Agency’s Public Education Information Management System. Data were then imported into the Statistical Package for Social Sciences software for analysis.

## Results

Prior to conducting inferential statistical procedures, specifically Analysis of Variance (ANOVA) procedures, to answer the research questions presented above, checks for its underlying assumptions were made. Although some of the assumptions were not met, Field (2009) contends that the parametric ANOVA procedure is sufficiently robust that these violations can be withstood. Accordingly, use of parametric ANOVA procedures were justified.

### Instructional Leadership Dollars Across School Years

Regarding the extent to which differences were present in the distribution of instructional leadership dollars spent per student at the elementary, middle, and high school levels for the 2009-2010 school year, the parametric ANOVA revealed a statistically significant difference,  $F(2, 5229) = 5.52, p < .001$ , partial  $\eta^2 = .002$ . The effect size for this difference was below small (Cohen, 1988). To determine which pairs of school levels differed from each other, post hoc procedures were conducted next. Scheffe` post hoc procedures revealed that differences were present

between the elementary and high school levels, and between the middle and high school levels. As revealed in Table 1, the average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school and elementary school levels, which were almost the same. An average of about \$12 less was spent at the middle schools when compared with high schools, and about \$11 less was spent at elementary schools per student when compared to the high school level.

**Table 1**

*Descriptive Statistics for Instructional Leadership Dollars Spent Per Student for the 2009-2010 Through the 2012-2013 School Years*

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2009-2010			
Elementary Schools	3,044	\$87.64	\$88.19
Middle Schools	1,061	\$87.03	\$87.81
High Schools	1,127	\$99.00	\$145.39
2010-2011			
Elementary Schools	3,095	\$87.12	\$101.24
Middle Schools	1,018	\$90.17	\$93.51
High Schools	1,148	\$110.30	\$188.06
2011-2012			
Elementary Schools	3,087	\$81.15	\$122.20
Middle Schools	1,021	\$86.56	\$85.45
High Schools	1,163	\$110.91	\$251.68
2012-2013			
Elementary Schools	3,112	\$85.06	\$86.12
Middle Schools	1,027	\$92.12	\$99.28
High Schools	1,165	\$207.18	\$3,387.80

Concerning the extent to which differences were present in the distribution of instructional leadership dollars spent per student at the elementary, middle, and high school levels for the 2010-2011 school year, a statistically significant difference was yielded,  $F(2, 5258) = 14.86, p < .001$ , partial  $n^2 = .01$ . The effect size for this difference was small (Cohen, 1988). Differences were present between the elementary and high school levels, and between the middle school and high school levels. The average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. An average of about \$3 less was spent in

instructional leadership dollars per student at elementary schools than middle schools, about \$20 less was spent at the middle schools when compared with high schools, and about \$23 less was spent at elementary schools per student when compared to the high school level. Table 1 contains the descriptive statistics for this analysis.

With respect to the 2011-2012 school year, a statistically significant difference was revealed,  $F(2, 5268) = 15.62, p < .001$ , partial  $n^2 = .01$ , small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. Revealed in Table 1 are the descriptive statistics for this analysis.

In reference to the 2012-2013 school year, the result approached but did not reach the conventional level of statistical significance,  $F(2, 5301) = 2.61, p = .07$ , partial  $n^2 = .001$ , small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. Table 1 contains the descriptive statistics for this analysis.

Regarding the 2013-2014 school year, a statistically significant difference was revealed,  $F(2, 5545) = 20.68, p < .001$ , partial  $n^2 = .01$ , small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. Delineated in Table 2 are the descriptive statistics for this analysis.

**Table 2**

*Descriptive Statistics for Instructional Leadership Dollars Spent Per Student for the 2013-2014 Through the 2016-2017 School Years*

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2013-2014			
Elementary Schools	3,272	\$90.12	\$90.02
Middle Schools	1,103	\$97.96	\$101.00
High Schools	1,173	\$124.30	\$288.77
2014-2015			
Elementary Schools	3,369	\$100.76	\$169.15
Middle Schools	1,038	\$102.96	\$94.10
High Schools	1,174	\$131.49	\$197.41

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2015-2016			
Elementary Schools	3,157	\$106.56	\$105.53
Middle Schools	1,083	\$107.24	\$100.94
High Schools	1,239	\$135.38	\$305.81
2016-2017			
Elementary Schools	3,363	\$124.58	\$387.22
Middle Schools	1,069	\$116.08	\$95.85
High Schools	1,203	\$142.09	\$248.31

Concerning the 2014-2015 school year, a statistically significant difference was yielded,  $F(2, 5578) = 15.67, p < .001$ , partial  $n^2 = .01$ , small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. Table 2 contains the descriptive statistics for this analysis.

With respect to the 2015-2016 school year, a statistically significant difference was revealed,  $F(2, 5476) = 13.31, p < .001$ , partial  $n^2 = .01$ , small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the middle school level, and were lowest at the elementary school level. Table 2 contains the descriptive statistics for this analysis. In reference to the 2016-2017 school year, a statistically significant result was not present,  $F(2, 5632) = 2.01, p = .13$ . Though not statistically significant, the average instructional leadership dollars spent per student was highest at the high school level, followed by the elementary school level, and were lowest at the middle school level. Revealed in Table 2 are the descriptive statistics for this analysis.

Regarding the 2017-2018 school year, the difference was statistically significant,  $F(2, 5473) = 9.92, p < .001$ , partial  $n^2 = .004$ , below small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the elementary school level, and were lowest at the middle school level. Revealed in Table 3 are the descriptive statistics for this analysis.

**Table 3**

*Descriptive Statistics for Instructional Leadership Dollars Spent Per Student for the 2017-2018 and the 2018-2019 School Years*

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2017-2018			
Elementary Schools	3,168	\$125.55	\$133.11
Middle Schools	1,087	\$116.32	\$87.39
High Schools	1,221	\$142.66	\$210.09
2018-2019			
Elementary Schools	3,243	\$129.35	\$92.68
Middle Schools	1,208	\$126.66	\$197.55
High Schools	1,220	\$147.37	\$187.64

Concerning the 2018-2019 school year, a statistically significant difference was yielded,  $F(2, 5668) = 8.24, p < .001$ , partial  $n^2 = .003$ , below small effect size (Cohen, 1988). The average instructional leadership dollars spent per student was highest at the high school level, followed by the elementary school level, and were lowest at the middle school level. Table 3 contains the descriptive statistics for this analysis.

### **Percent of Total Monies for Instructional Leadership Across School Years**

Regarding the extent to which differences were present in the percent of total monies spent for instructional leadership at the elementary, middle, and high school levels for the 2009-2010 school year, the parametric ANOVA revealed a statistically significant difference,  $F(2, 5229) = 9.73, p < .001$ , partial  $n^2 = .004$ . The effect size for this difference was below small (Cohen, 1988). To determine which pairs of school levels differed from each other, post hoc procedures were conducted next. Scheffe` post hoc procedures revealed that differences were present between the elementary and middle school levels, and between the elementary and high school levels. As delineated in Table 4, the average percent of total monies spent for instructional leadership was highest at the elementary school level, followed by the middle school, and lowest at the high school level.

**Table 4**

*Descriptive Statistics for the Percent of Total Monies Spent for Instructional Leadership for the 2009-2010 Through the 2012-2013 School Years*

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2009-2010			
Elementary Schools	3,044	1.27	0.94
Middle Schools	1,061	1.16	0.87
High Schools	1,127	1.12	1.32
2010-2011			
Elementary Schools	3,095	1.24	0.76
Middle Schools	1,018	1.21	0.90
High Schools	1,148	1.18	1.34
2011-2012			
Elementary Schools	3,087	1.23	0.81
Middle Schools	1,021	1.25	0.98
High Schools	1,163	1.19	1.28
2012-2013			
Elementary Schools	3,112	1.29	0.88
Middle Schools	1,027	1.31	1.02
High Schools	1,165	1.23	1.23

Concerning the 2010-2011 school year, the parametric ANOVA did not reveal a statistically significant difference,  $F(2, 5258) = 2.04, p = .13$ . Though not statistically significant, the average percent of total monies spent for instructional leadership was highest at the elementary school level, followed by the middle school, and lowest at the high school level. Table 4 contains the descriptive statistics for this analysis. With respect to the 2011-2012 school year, a statistically significant result was not present,  $F(2, 5268) = 1.09, p = .34$ . Though not statistically significant, the average percent of total monies spent for instructional leadership was highest at the middle school level, followed by the elementary school level, and were lowest at the high school level. Presented in Table 4 are the descriptive statistics for this analysis.

In reference to the 2012-2013 school year, the result approached but did not reach the conventional level of statistical significance,  $F(2, 5301) = 2.38, p = .09$ , partial  $n^2 = .001$ , below small effect size (Cohen, 1988). The average percent of total monies spent for instructional leadership was highest at the middle school level, followed by the elementary school level,

and were lowest at the high school level. Revealed in Table 4 are the descriptive statistics for this analysis.

Regarding the 2013-2014 school year, a statistically significant difference was not yielded,  $F(2, 5545) = 1.69, p = .19$ . Though not statistically significant, the average percent of total monies spent for instructional leadership was highest at the middle school level, followed by the elementary school level, and were lowest at the high school level. Table 5 contains the descriptive statistics for this analysis.

**Table 5**

*Descriptive Statistics for the Percent of Total Monies Spent for Instructional Leadership for the 2013-2014 Through the 2016-2017 School Years*

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2013-2014			
Elementary Schools	3,272	1.33	0.88
Middle Schools	1,103	1.36	1.23
High Schools	1,173	1.28	1.21
2014-2015			
Elementary Schools	3,369	1.40	0.96
Middle Schools	1,038	1.38	1.05
High Schools	1,174	1.37	1.38
2015-2016			
Elementary Schools	3,157	1.43	0.93
Middle Schools	1,083	1.42	1.24
High Schools	1,239	1.37	1.41
2016-2017			
Elementary Schools	3,363	1.57	0.92
Middle Schools	1,069	1.60	1.62
High Schools	1,203	1.43	1.14

Concerning the 2014-2015 school year, the result was not statistically significant,  $F(2, 5578) = 0.27, p = .76$ . Though not statistically significant, the average percent of total monies spent for instructional leadership was highest at the elementary school level, followed by the middle school level, and were lowest at the high school level. Table 5 contains the descriptive statistics for this analysis.

With respect to the 2015-2016 school year, a statistically significant difference was not revealed,  $F(2, 5476) = 1.62, p = .20$ . Though not

statistically significant, the average percent of total monies spent for instructional leadership was highest at the elementary school level, followed by the middle school level, and were lowest at the high school level. Delineated in Table 5 are the descriptive statistics for this analysis. In reference to the 2016-2017 school year, the result was statistically significant,  $F(2, 5632) = 7.77, p < .001$ , partial  $n^2 = .003$ , below small effect size (Cohen, 1988). The average percent of total monies spent for instructional leadership was highest at the middle school level, followed by the elementary school level, and were lowest at the high school level. Revealed in Table 5 are the descriptive statistics for this analysis.

Regarding the 2017-2018 school year, a statistically significant difference was not revealed,  $F(2, 5473) = 0.83, p = .44$ . Though not statistically significant, the average percent of total monies spent for instructional leadership was highest at the elementary school level, followed by the middle school level, and were lowest at the high school level. Table 6 contains the descriptive statistics for this analysis.

**Table 6**

*Descriptive Statistics for the Percent of Total Monies Spent for Instructional Leadership for the 2017-2018 and the 2018-2019 School Years*

School Year and School Level	<i>n</i>	<i>M</i>	<i>SD</i>
2017-2018			
Elementary Schools	3,168	1.58	0.98
Middle Schools	1,087	1.55	1.44
High Schools	1,221	1.52	2.18
2018-2019			
Elementary Schools	3,243	1.65	1.08
Middle Schools	1,208	1.57	1.17
High Schools	1,220	1.54	1.55

Concerning the 2018-2019 school year, the parametric ANOVA revealed a statistically significant difference,  $F(2, 5668) = 4.30, p = .014$ , partial  $n^2 = .002$ , below small effect size (Cohen, 1988). The average percent of total monies spent for instructional leadership was highest at the elementary school level, followed by the middle school level, and were lowest at the high school level. Table 6 contains the descriptive statistics for this analysis.

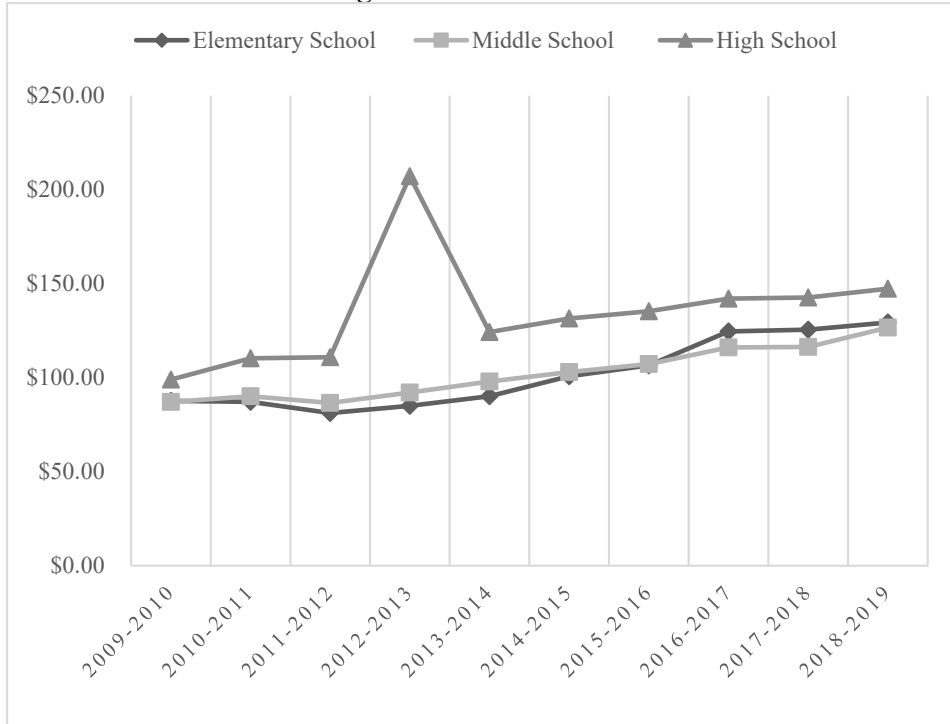


### Trends in Instructional Leadership Dollars Across School Years

With respect to the trend in the amount of monies spent on instructional leadership per student across the 2009-2010 school year through the 2018-2019 school year for the elementary, middle, and high school levels, the monies spent per student increased for all three school levels. At the elementary level, approximately a \$42 increase occurred in the instructional leadership dollars spent per student from the 2009-2010 school year through the 2018-2019 school year. At the middle school level, instructional leadership dollars increased by about \$40 during the 10 school years. At the high school level, the monies spent on instructional leadership per student increased by about \$48 during the aforementioned 10 school years. Presented in Figure 1 is the trend in monies spent on instructional leadership per student during the 2009-2010 school year through the 2018-2019 school year.

**Figure 1**

*Instructional Leadership Dollars Spent Per Student for the 2009-2010 School Year Through the 2018-2019 School Year*

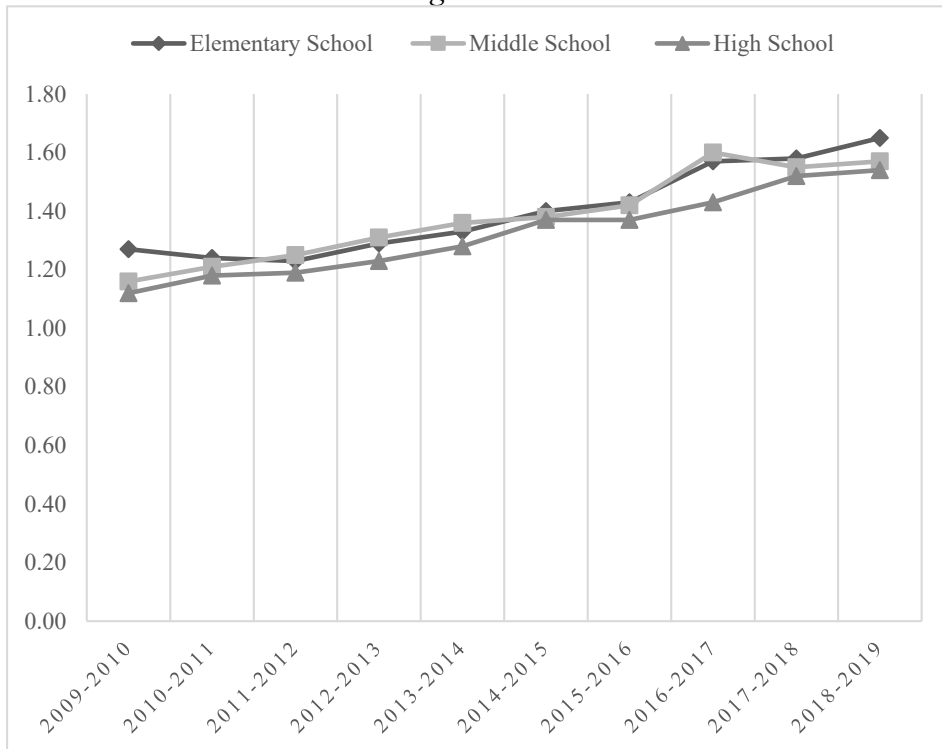


## Trends in Percent of Total Monies Spent for Instructional Leadership

Regarding the trend in the percent of total monies spent on instructional leadership across the 2009-2010 school year through the 2018-2019 school year for the elementary, middle, and high school levels, the percent of total monies spent remained nearly unchanged. At the elementary level, a 0.38% increase occurred in the instructional leadership dollars spent from the 2009-2010 school year through the 2018-2019 school year. At the middle school level, the percent spent on instructional leadership dollars increased by about 0.41% during the 10 school years. At the high school level, the percent of monies spent on instructional leadership increased by about 0.42% during the aforementioned 10 school years. Depicted in Figure 2 is the trend in the percent of total monies spent on social work services during the 2009-2010 school year through the 2018-2019 school year.

**Figure 2**

*Percent of Total Monies Spent on Instructional Leadership for the 2009-2010 School Year Through the 2018-2019 School Year*



## Discussion

In this investigation, the distribution of Instructional Leadership dollars spent per student at the elementary, middle, and high school levels for the 2009-2010 school year through the 2018-2019 school year was examined. Statistically significant differences were established in the amount of Instructional Leadership dollars spent at all three school levels for the majority of the 10 school years. The average Instructional Leadership dollars spent per student was highest at the high school level, followed by the middle school and elementary school levels, which were frequently similar in the amount of monies spent per pupil. At the elementary level, approximately a \$42 increase occurred in the Instructional Leadership dollars spent per student from the 2009-2010 school year through the 2018-2019 school year. At the middle school level, Instructional Leadership dollars increased by about \$40 during the 10 school years. At the high school level, the monies spent on Instructional Leadership per student increased by about \$48 during the aforementioned 10 school years.

Also examined in this investigation was the percent of total dollars spent on Instructional Leadership for the 2009-2010 school year through the 2018-2019 school year. At the elementary level, a 0.38% increase occurred in the Instructional Leadership dollars spent from the 2009-2010 school year through the 2018-2019 school year. At the middle school level, the percent spent on Instructional Leadership dollars increased by about 0.41% during the 10 school years. At the high school level, the percent of monies spent on Instructional Leadership increased by about 0.42% during the aforementioned 10 school years.

## Implications for Policy and for Practice

As test scores continue to be the main measure used by the state legislature to gauge student academic achievement, schools and school districts also continue their efforts on increasing teacher quality and effectiveness. As a result, a renewed focus has been placed on instructional leadership as another strategy of providing on-going professional development with the goal of improving teaching practices. This renewed emphasis on instructional leadership is evident by the increase of Instructional Leadership expenditures within the past 10 aforementioned school years as well as the change of the Texas principal certification

requirement to that of *Principal as Instructional Leader* (Texas Education Agency, [2021](#)).

Although an increase in expenditures of \$42, \$40, and \$48 per student at the elementary, middle, and high school levels, respectively, may appear minimal, these figures represent a 48%, 46%, and 49% increase in the amount of monies spent on Instructional Leadership from 2009-2010 school year to the 2018-2019 school year. Unfortunately, although the expenditures in Instructional Leadership have increased, student academic achievement, as measured by test scores, have not increased (National Assessment of Educational Progress, [2021](#)). Additionally, funding for Instructional Leadership at the elementary and middle school levels were statistically significantly lower than funding at the high school level. The lower funding at the younger levels and the higher funding at the high school level may be interpreted to mean that a gap exists in teacher skillsets and expertise that then necessitates an additional investment of instructional leadership at the higher school level. Similarly, the gap in spending may indicate that not enough monies are being spent at the younger levels, which then again necessitates higher levels of spending as students reach the high school level.

Therefore, schools and school district leaders would benefit in reevaluating the monies spent at each school levels to determine if it would be wiser to perhaps invest more monies at the younger levels as this shift may lead to needing to spend less monies at the high school level. Moreover, we believe that school district leaders should be involved, along with state legislators, in making decisions regarding future funding and specific allocations of such funding. Additionally, teacher preparation programs may also benefit from reevaluating their curriculum and find additional opportunities to increase the effectiveness of newly graduating teachers. Furthermore, schools, school districts, and policymakers are encouraged to examine other factors that may influence student academic achievement apart from instructional practices (e.g., social and emotional learning, the environmental struggles associated with poverty) and develop plans to provide students with wraparound services with the goal of supporting the whole child. Lastly, with the on-going negative effects of the Covid-19 pandemic on students' learning, lawmakers are encouraged to continue to provide additional funding to schools and school districts so that

the academic and social and emotional needs of students can be adequately addressed.

### **Recommendations for Future Research**

Based upon the results of this investigation, several recommendations are possible for future research. First, researchers are encouraged to replicate this study using other instruction-related expenditure categories and to compare the rates of increase or decrease of the other expenditures to the expenditures for Instructional Leadership. Second, researchers are encouraged to replicate this study in other states and investigate any trends regarding Instructional Leadership and other instruction-related expenditures in public schools across the country. Third, as principals are now also required to be instructional leaders, the expenditures of School Leadership are recommended to also be examined. Next, researchers are encouraged to replicate this study to include private and charter schools. Finally, because education funding is unique to each country, we encourage researchers to extend this study to other countries than the United States. Such studies could provide information regarding the generalizability or non-generalizability of the results discussed herein.

### **Conclusion**

In this Texas statewide analysis, Instructional Leadership dollars spent per student at the elementary, middle, and high school levels were examined for the 2009-2010 school year through the 2018-2019 school years. Also investigated was the percent of total dollars spent on Instructional Leadership for the same 10 school years. Statistically significant differences were documented in the amount of dollars spent per student for the majority of the 10 school years. However, only a few of the school years yielded a statistically significant difference in the percent of total monies spent on Instructional Leadership among the three school levels for the aforementioned school years. The amount of Instructional Leadership dollars spent per student were highest at the high school level, followed by the middle school and elementary school levels, which frequently spent a about the same amount of monies per pupil. From the 2009-2010 school year through the 2018-2019 school year, expenditures for elementary, middle, and high schools across the State of Texas increased by only \$42, \$40, and \$48, respectively.

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