

THE MANDATE MYSTERY: HOW MANDATES IMPACT SCHOOL DISTRICTS PHYSICALLY AND FINANCIALLY

Abstract

Renovation and construction of Texas public schools is occurring at a rapid pace and at high prices. Business continues to blossom in the area of school construction. Several factors influence the need to renovate or construct schools, but the impact curriculum mandates have on school construction is seldom explored. This study investigated the impact of the 2006 College Readiness Program (“4x4 curriculum” mandate) on Texas public school (a) construction trends, (b) trends in type of facilities constructed, and (c) financial discretion. Superintendents from 228 Texas public school districts voluntarily participated in an e-mail survey to determine the impact curriculum mandates had on school construction. Relationships were noted between school district size and the need to construct facilities. Implementing the 4x4 curriculum mandate cost districts on average approximately \$500,000. The nature in which school districts funded construction projects differed according to school district size. Districts reported spending different percentages of the total budget on school construction according to the three levels of school district size. Trends revealed science laboratory facilities, more than any other type, were needed to fully implement the 4x4 curriculum mandate. The data from this study indicated, as a result of the 4x4 curriculum mandate, (a) construction trends changed in Texas public schools, (b) trends were apparent in type of facilities constructed, and (c) school districts experienced a financial impact.

A brief trip through Texas will reveal school construction happening in numerous forms. Renovation and construction of Texas public schools is occurring at a rapid pace and at high prices. Across the state, the demand for school construction continues to remain at the forefront of local and governmental dialogues. According to the National Center for Education Statistics (NCES) (1999), approximately \$30 billion is spent annually in the United States for school construction. The costs of construction are rising. School construction is big business. For example, Arkansas, Louisiana, Oklahoma and Texas spent a combined total of \$8.1 billion on school construction between 2007 and 2008 (Abramson, 2008). According to Abramson, the completion of new schools accounted for 63.5% of the construction costs, while 23.4% and 13.1% were spent for additions and renovations respectively. As construction costs rise, school districts are now spending more money and getting less for the school district’s investment. School districts spent an additional 3.2 percent in 2007 for school

construction, while the cost for newly constructed facilities rose 6 percent per square foot (Abramson, 2008). Such changes in the construction market left districts spending an additional \$800 million for construction in the 2007–2008 school year over the 2006–2007 school year. However, these additional expenditures did not equate to more facilities. In fact, districts spent more for the completion of fewer buildings. This construction mystery leaves many asking, why are states still constructing school facilities at a rapid rate?

To explore this mystery it is imperative to acknowledge the underlying causes and current situation facing many states in regard to school construction. For example, in 2007 Texas, Louisiana, Oklahoma, and Arkansas accounted for 13.5 percent (\$2.8 billion) of the nation's construction expenses, ranking them the second largest construction spending region in the United States (Abramson, 2008). Among these states, Texas school construction costs account for the majority of expenditures and consistently make Texas a high spending state year after year. Educational leaders across Texas are presently faced with daunting construction challenges in an era of tight budgets and rigorous accountability demands. Rising construction costs require districts to evaluate carefully every decision regarding renovation and construction.

Even before construction can begin, school districts must initiate dialogue with local constituencies about the need for expansion or renovation. Needs assessments conducted by the school districts may include evaluations of the following: demographic trends, conditions and functionality of current facilities, capacity of facilities often relative to state and federal mandates, community support and feasibility studies. While no two school districts are identical, a needs assessment reveals a district's unique and individual construction concerns. Thus, every educational facilities construction project must meet the unique and individual needs of the representative Texas public school district. However, in general, construction may be needed to address one or all of the following: (a) increasing or decreasing enrollment, (b) out of date facilities, (c) facilities in poor condition, or (d) curricular changes.

The source of overcrowding and design capacity issues can more often than not be attributed to the annual growth rate of the population. Texas public schools enroll approximately 4.5 million students annually and anticipate an average annual growth of 75,000 to 89,000 students (School Data Direct, 2008; Strayhorn, 2006), representing an annual growth rate of approximately 2%. According to the comptroller's 2006 survey, 20 school districts in Texas have 493 buildings over capacity by more than 10%. School districts are able to either absorb this growth, or they often find themselves in a continuous building cycle. Such is the case in many of the faster growing districts.

In some cases growth rate issues are overshadowed by antiquated facilities. On average, Texas public schools are 34 years of age (Strayhorn,

2006). Over the past 10 years many of the antiquated school facilities have been renovated. Despite population growth across Texas as a whole, areas reporting declining student enrollments have the oldest facilities (42.16 years old), while fast growing districts (6–10% growth) reported the newest facilities (19.64 years old). Areas with 80% or more students classified as economically disadvantaged report the oldest building ages overall (41.10 years old). Additionally, the comptroller's 2006 survey indicated 756 school buildings in the state would need to be replaced by 2026.

For the 4.5 million Texas public school students in 2009 attending schools built to accommodate the Baby Boomer generation, key curricular concerns emerge. Technology and rigorous curricula remain center stage in order to produce competitive graduates in an ever changing global marketplace. However, for a variety of reasons, many districts struggle to meet the new technology and curriculum standards. In an era of greater accountability, schools are often required to modify facilities to meet underfunded/unfunded state and federal curricular mandates. Texas public schools are no exception.

In 2006, Governor Rick Perry signed critical legislation creating the college readiness program, which incorporated a more rigorous curriculum for all freshmen entering Texas public high schools in the 2007–2008 school year (Office of the Governor Rick Perry, 2008). The college readiness program signed by Governor Perry was an action plan designed to ensure every Texas student (a) was college ready, or (b) possessed skills necessary to compete in a global economy when exiting high school (Texas Administrative Code, 2006). The twofold purpose of the college readiness program was to increase the number of Texas students enrolling in higher education and to decrease the number of students enrolling in higher education needing developmental coursework. A critical piece of the college readiness program came to be known as the “4x4 curriculum.” The 4x4 curriculum redefined academically rigorous coursework by including an additional fourth year of science and math in the required curriculum. Thus, in order to graduate under the Recommended High School Program students must complete four years of high school level English, science, math and social studies. Furthermore, in 2008, in an effort to ensure an increased level of expectations and achievement for Texas graduates, the Texas Higher Education Coordinating Board (THECB) and the Texas Education Agency (TEA) joined forces to implement new College Readiness Standards (CRS). The CRS requirements are designed to align public school curricula and higher education curricula. The goal of the CRS is to provide students with the necessary tools to successfully transition between high school and college or the workforce (THECB, 2010). The 4x4 curriculum legislation of 2006, coupled with the 2008 College Readiness Standards, signaled a new performance standard for Texas graduates.

With each new legislative session, Texas public school districts receive additional mandates to implement. While certainly worthy, the 4x4

curriculum mandated a shift in curricular requirements. According to the Texas Association of School Boards (TASB) (2008), complying with mandates such as the 4x4 curriculum inevitably increases a district's operating costs by requiring modifications to facilities, personnel numbers, purchases of new equipment/supplies, and payment of new fees. "In some instances, the mandates are initially accompanied by state funding; in others no state funding is made available" (p. 20). According to C. Fletcher, Pflugerville Independent School District Board President, Texas school districts are struggling to respond to unfunded mandates because the 80th Texas legislature froze all school districts at 2005–2006 spending levels by enacting the "targeted revenue" concept. C. L. Fletcher also noted that, "even if a district increases its taxable values, thereby increasing the tax revenue, none of that increase goes to the local district. The state simply reduces the amount that it funds, to make it a zero sum game..." (personal communication, September 2, 2009). "As a result, school boards are forced to seek additional funding from state and local tax payers" (TASB, 2008, p. 20). With districts across Texas needing more revenue, Clayton Downing, president of the Texas School Coalition and former superintendent of Lewisville schools, noted many districts were not in favor of tax rate elections given the current economic downturn. "While most people still support their local school district, many are in no frame of mind to run out there and vote for higher property taxes" (Stutz, 2008, p. 1). Thus, 1 in 10 districts statewide are squeezed financially (Stutz, 2008). Many districts experiencing financial strain are smaller school districts. According to K. McCraw, the Executive director of the Texas Association of Community Schools, "small school districts are burdened to a greater degree financially than are larger school districts due to their lack of economies of scale. Additional science laboratories or additional teachers will always cost small school districts more on a per student basis" (personal communication, September 10, 2009).

Therefore, investigating the impact of curricular requirements on Texas Public schools is important. As a representative of The Tarleton Research Laboratory on Educational Facilities (TRLEF), I examined the impact of the 4x4 curriculum mandate on Texas public school construction. I examined monetary or physical changes experienced by Texas public school districts in order to comply with the college readiness program (4x4 curriculum). The findings of this study addressed the statement of concern by many Texas public school leaders when required to implement unfunded mandates in an era of tighter budgets and decreasing budget reserves (Haughey, 2008). The study provided an initial investigation on the impact of the 4x4 curriculum mandate in order to prompt future research and informed discussion. Findings are relevant and of interest to state policy makers, public school administrators and school boards with financial oversight of Texas Public schools.

Method

Texas public schools ($N = 228$) voluntarily participated in the study. For the purposes of this study a Texas public school was defined as an independent school district open to the public, excluding charter schools. The study did not include alternative or juvenile correctional facilities. According to the Texas Education Agency (2009a) there are 1,036 public school districts in Texas. All 1,036 Texas public school districts were recruited to participate in the study via an e-mail invitation sent to district superintendents. Embedded in each e-mail invitation were links to the 4x4 survey. Of the 1,036 Texas public schools, administrators responded from 228 districts (22% response rate). Respondents completed a brief 15-question survey focused on assessing whether, as a result of the 4x4 curriculum mandate, (a) construction trends changed in Texas public school districts, (b) trends were apparent in type of facilities constructed, and (c) school districts experienced a financial impact.

Results

Construction Trends

When Texas school district superintendents were asked to specify the districts' need to modify educational facilities to fully implement the 4x4 curriculum mandate, construction trends became apparent. According to the study, 51% of the reporting Texas school districts either remodeled/constructed educational facilities or had plans to do so in the near future. With superintendents reporting a need to modify facilities in order to comply with a state mandate, the TRLEF investigated whether a difference existed in the need to construct facilities according to school district size. For the purposes of this study, school district size was defined as small (student enrollment less than 500), intermediate (student enrollment greater than 500 but less than 1600), or large (student enrollment 1600 and above, with an average enrollment of 6,522). Results indicated a relationship existed between school size and construction need. As school district size increased, the need to construct facilities increased as well.

Types of Facilities Constructed

Additional construction trends indicated a pattern across school districts regarding the types of facilities constructed. Sixty-six percent of Texas public school districts reported constructing/remodeling science laboratories to fully implement the 4x4 curriculum mandate. While science laboratories dominated the construction, the remaining portion of school districts' responses confirmed the need to construct/remodel other types of educational facilities as well.

Thirty-four percent of Texas school districts constructed a diverse mixture of facilities including regular classrooms, computer laboratories, and classroom wings with six or more classrooms to comply with the 4x4 curriculum mandate. According to Mike King, American Institute of Architects (AIA), the 2009 estimated expenditures for construction suggested that a modern science laboratory with a combined lecture room would cost \$185/square foot minimum (personal communication, January 22, 2009). The combined classroom/lab is estimated to require 1,400 square feet, a preparation room of 200 square feet, and the necessary corridor space. An additional science laboratory and the appropriate auxiliary space totals approximately 2,250 square feet at an estimated cost of \$416,250. Lab equipment adds approximately \$75,000 to the \$416,250 construction costs. These estimated figures result in a \$500,000 total cost per laboratory, as a result of the 4x4 curriculum mandate, with districts reporting an additional \$12,500 in maintenance and energy cost.

Expenditures/Financing

The estimated construction figures suggested the 4x4 curriculum mandate would require a significant financial investment by school districts. The findings indicated that indeed, Texas school districts reported spending a median of \$500,000 on facilities to implement the 4x4 curriculum mandate. In addition, public school districts indicated future expenditures related to the implementation of the 4x4 curriculum to be an additional \$500,000. The study explored the differences in financial impacts on school districts by investigating the funding method employed to construct/remodel current facilities. Differences were apparent in funding method chosen by school districts with 44.1 % of respondents reporting the use of construction bond elections to address the financial needs incurred as a result of the 4x4 curriculum mandate. The use of fund balance/reserves was preferred by 29.6% of the reporting school districts. The remaining 26.3% of reporting school districts chose to fund construction by other means including, but not limited to, a tax increase or reduction of expenditures.

By exploring the funding method preferred by school districts the TRLEF also noted a relationship between school district size and funding method employed. Across the three levels of school district size, the results of the study indicated differences in funding method employed. Larger school districts preferred to employ construction bond elections and small school districts preferred to use fund balance/reserves to construct facilities.

Furthermore, the study revealed a relationship between school district size and the percentage of the total budget used in response to the 4x4 curriculum mandate. A negative relationship was noted between school size and percentage of budget used in construction. As school size increased, the percentage of the budget used to construct facilities de-

creased. Across all three levels of school district size, differences in percentage of total budget used were reported. Small school districts reported using a larger percentage of the budget to construct facilities than intermediate school districts and large school districts. Intermediate districts reported using a larger percentage of the budget to construct facilities than large districts. These findings indicated an inverse relationship between school district size and percentage of budget used to construct facilities.

Discussion

The data from this study indicated that, as a result of the 4x4 curriculum mandate, (a) construction trends changed in Texas public school districts, (b) trends were apparent in type of facilities constructed, and (c) schools experienced a financial impact. Larger school districts constructed more facilities in response to the 4x4 curriculum mandate. The majority of Texas public school districts constructed/remodeled at least one science laboratory at a minimum cost of \$500,000. District funding methods differed according to school district size. Smaller school districts were more likely to use fund balances to construct facilities to meet changing curricular demands. Larger school districts used construction bond elections to generate construction funds. In response to the 4x4 curriculum mandate, small school districts spent a larger percentage of their total budget on facilities than large school districts.

These funding preferences may vary between large school districts and small school districts in response to a variety of community and administrative expectations. It is important to note that, when a school district chooses to fund a construction project with bonds or fund balance, the decision will be made based on the unique financial situation of each school district. "The fund balance of the General Fund is of primary significance because the General Fund is the primary fund through which most functions are financed and which includes state aid and local maintenance taxes" (TEA, 2008, p. 136). When using fund balance, a district must evaluate the ability to manipulate the tax rate on the operating side of the financial equation. According to D. Cabrera, Irving Independent School District Assistant Superintendent of Finance, if school districts have not reached the tax cap, revenue can potentially be generated from a tax increase (personal communication January 8, 2010). However, if a district has reached the tax cap, then districts must hold a tax ratification election to get voter approval. With the current funding structure in Texas, districts have little opportunity to generate additional revenue by manipulating the tax rate in this manner. Districts may explore the use of general obligation bonds, which enable the district to pay back the investment over a longer period of time. More revenue is often generated with a bond election versus a tax ratification. The relative amount of undesignated unreserved fund balance is directly related to the districts' ability to receive a higher bond rating. As

a result, districts with higher bond ratings can save millions of dollars by receiving lower interest rates when selling bonds (TEA, 2010). Districts choosing to use fund balance to meet immediate needs resulting from the 4x4 curriculum mandate may have negatively impacted the districts' ability to secure the best interest rates when selling bonds.

This study suggests that school districts vary in the manner in which they conduct financial transactions according to school district size. With this funding variation in mind, it is important for policy makers to consider this current financial phenomenon prior to implementing mandates. This financial phenomenon requires policy makers to initially investigate mandate feasibility as it relates to school district operation and management. Investigating such financial phenomena in funding preferences is warranted, as Texas public school districts are required to implement unfunded mandates in an era of tighter budgets and decreasing budget reserves (Haughey, 2008). After reviewing the study, policy makers with financial oversight of Texas public school districts should give considerable attention to the ability of districts to use fund balance and seek voter approval via bond elections as a response to unfunded mandates.

Initial investigations regarding district operation and management should be conducted by an independent review board. The review board should be granted authorization to review a school district's financial capacity to implement mandates completely. The review should focus on mandate relief. While in the case of the 4x4 curriculum mandate, some mandate relief was made available through the science laboratory grant program; the relief, however, was designed to be used only for constructing/renovating high school science laboratories deemed insufficient to comply with the curriculum requirements imposed by the college readiness program. Mandate relief is imperative considering that 133 school districts requested a combined total of \$224, 910,114 from the science laboratory grant program in 2008–2009. The amount awarded was \$20,000,000 dispersed in varying quantities to 11 (8.89%) of the requesting schools (TEA, 2009b). In order to address the present need at the current rate it will take 10.2 years to meet this financial need across Texas.

Policy makers should explore voluntary school district participation in performance/construction incentives for districts requesting state construction funding. For example, districts constructing sustainable "green" structures or agreeing to reach certain performance goals would receive construction incentives. Perhaps policy makers might further endorse rigorous curricula at the secondary level, designed to produce "college ready students," by funding secondary school construction at a higher rate than elementary school construction. Policy makers may also consider distributing funds on a per-pupil basis for mandated construction. In addition, policy makers should explore modifying construction funding formulas to restrict state funded construction to instructional purposes only. The restriction of funds will redirect funds so that future curricu-

lum mandates and any required construction/remodeling of facilities will have funding available. Furthermore, policy makers need to explore the feasibility of generating revenue through impact fees with voter approval in fast growing districts. Providing mandate relief by suspending existing mandates, which also require financial commitments, will assist the state and local districts by either redirecting funds or curtailing expenses.

Small districts tending to employ fund balance to construct facilities may benefit from a cap placed on the total budget expended per project countered with matching state funds upon qualification. Finally, a provision must be made for districts with depleted fund balances prior to the enactment of legislation requiring construction expenditures.

References

- Abramson, P. (2008). The 2008 annual school construction report: More dollars spent, less construction completed. *School Planning & Management*. Retrieved October 22, 2008, from http://www.peterli.com/spm/pdfs/constr_report_2008.pdf
- Haughey, J. (2008). Education construction hyperboom about to end. *Building Design & Construction*. Retrieved November 6, 2008, from <http://www.bdcnetwork.com>
- National Center for Education Statistics (NCES). (1999). *How old are America's public schools?* (NCES 1999-048). Retrieved November 6, 2008, from <http://nces.ed.gov/surveys/frss/publications/1999048/>
- Office of the Governor Rick Perry (State of Texas). (2008). *High school graduation requirements*. Retrieved October 8, 2008, from http://governor.state.tx.us/priorities/education/public/standards/high_school_graduation_requirements/
- School Data Direct. (2008). *Texas public schools & districts: Education facts*. Retrieved November 6, 2008, from <http://www.schooldatadirect.org>
- Strayhorn, C. K., Texas Comptroller of Public Accounts. (2006). *Current and future needs of Texas public school districts*. Retrieved October 22, 2008, from <http://www.window.state.tx.us/specialrpt/facilities2006/>
- Stutz, T. (2008, September 9). Texas school districts asking voters for tax hikes. *The Dallas Morning News*. Retrieved September 1, 2009, from <http://www.dallasnews.com/sharedcontent/dws/news/texasouthwest/stories/090908dntexschooltaxes.1b6b6c5.html>
- Texas Administrative Code §61.1091 (2006).
- Texas Association of School Boards (TASB). (2008). *Legislative briefing book 81st regular session*. Retrieved September 1, 2009, from www.tasb.org
- Texas Education Agency (TEA). (2008). *Texas Education Agency financial accountability resource guide*. Retrieved January 9, 2010, from <http://ritter.tea.state.tx.us/school.finance/audit/resguide13/far/FAR.pdf>

- Texas Education Agency (TEA). (2009a). *AskTED*. Retrieved September 12, 2009, from <http://mansfield.tea.state.tx.us/TEA.AskTED.Web/Forms/SearchScreen.aspx?orgType=State>
- Texas Education Agency (TEA). (2009b). *School finance website: Science laboratory grant program*. Retrieved September 12, 2009, from <http://ritter.tea.state.tx.us/school.finance/facilities/sciencelab.html>
- Texas Education Agency (TEA). (2010). School bond guarantee program. Retrieved January 7, 2010, from <http://ritter.tea.state.tx.us/school.finance/bond.html>
- Texas Higher Education Coordinating Board (THECB). (2010). Texas college readiness standards. Retrieved January 8, 2010, from <http://www.thecb.state.tx.us/index.cfm?objectid=EADF962E-0E3E-DA80-BAAD2496062F3CD8>

Denae Dorris is a Huckabee Fellow for the Tarleton Research Laboratory on Educational Facilities in the Department of Educational Leadership and Policy Studies at Tarleton State University, Stephenville, Texas.