

The Condition of America's Schools: A National Disgrace



For almost 2 decades, a chorus of education and government organizations has decried the disgraceful condition of America's schools. Concerned groups, such as the American Association of School Administrators, Council of Great City Schools, National School Boards Association, and Education Writers Association (Lewis, 1989) documented a shocking backlog of deferred maintenance in a series of studies published between 1983 to 1992.

The American Society of Civil Engineers' Report Card on America's Infrastructure affirmed this finding by giving school infrastructure a grade of D minus in 2001. At the same time, data from research by Sielke, Dayton, Holmes, and Jefferson (2001) confirmed that few states fund school infrastructure in any meaningful manner. To make matters worse, little federal assistance is available. As such, the fiscal burden remains largely at the local school district level, creating serious equity issues.

In 1995, the U.S. General Accounting Office estimated \$112 billion was needed to address deferred maintenance, health and safety, and accessibility issues. Yet, even those estimates are incomplete because they do not capture the funding needed for new construction, additions, and ren-

ovations to accommodate increasing student enrollments and education reforms, such as class size reduction, that require additional space.

Defining School Infrastructure Needs

Many of the readers of this article may be more familiar with the phrase "capital outlay" than with "school infrastructure," but as one begins to think about the role of school facilities in supporting and enhancing education reform and student achievement, it becomes necessary to rethink the role of the physical environment of schools. According to Thompson and Wood (2000),

Different language has been used over the years to describe the physical environment of education. School plant and facilities have been the common terms of describing school buildings, and capital outlay usually has referred to all aspects of paying for the permanent facility and equipment needs of schools. In a broader and more recent context, the term 'infrastructure' has been used more frequently as it captures the whole range of capital needs in a single word. (pp. 254–255)

With a body of emerging research establishing the role of the physical environment of schools in student success, adequate and equitable funding of school infrastructure

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takes on new urgency (Crampton, Thompson, & Hagey, 2001). The first step in addressing the problem of insufficient funding for school infrastructure rests with development of a comprehensive definition that provides a common language for educators, policy makers, parents, and community members.

To develop such a comprehensive definition, a review and synthesis of school finance and school business management were undertaken, including such authoritative sources as *Principles of School Business Management* (Wood, Thompson, Picus, & Tharpe (1995); *School Business Administration: A Planning Approach* (Hack, Candoli, & Ray (1997); and *School District Budgeting* (Hartman, 1999). As a result, a comprehensive definition of *school infrastructure needs* can be divided into the following six components:

- **Deferred maintenance.** Deferred maintenance refers to maintenance necessary to bring a school facility up to good condition; that is, a condition in which only routine maintenance is required. If a facility is in such poor condition that it cannot be brought up to good condition, or if it would cost more to do so than to construct a new facility, deferred maintenance can refer to replacement of an existing facility.
- **New construction.** New construction may be a response to current overcrowding; to federal, state, or local mandates that require additional facilities, such as class size reduction measures; or to projected enrollment growth. The construction of a new facility includes the building(s); grounds (purchase, landscaping, and paving); and fixtures, major equipment, and furniture necessary to furnish it.
- **Renovation.** Renovation of an existing facility includes renovations for health, safety, and accessibility for the disabled. Renovation may also include renovations necessary to accommodate mandated educational programs.
- **Retrofitting.** Retrofitting of an existing facility applies to such areas as energy conservation (for example, installation of insulation or energy-efficient windows) and technology readiness (e.g., electrical wiring, phone lines, and fiber optic cables).
- **Additions to existing facilities.** Additions to existing facilities may be necessary to relieve overcrowding; to meet federal, state, or local mandates, such as class size reduction measures; or to accommodate projected enrollment growth. The cost of additions usually includes the fixtures, major equipment, and furniture necessary to furnish them.
- **Major improvements** to grounds, such as landscaping and paving.

This comprehensive definition served as the foundation for the research results presented in the next section. The use of a comprehensive definition to estimate unmet funding needs distinguishes this study from earlier ones that limited their research to a subset of the components.

Unmet Funding Needs for School Infrastructure

This study was undertaken to develop up-to-date and comprehensive estimates of school infrastructure funding needs on a state-by-state basis. Previous estimates, like those of the U.S. General Accounting Office (1995) and U.S. Department of Education (2000) were based on national samples to provide a national total. As such, they provide important, but limited, information as the results cannot be disaggregated by state. Because funding of elementary and secondary education is constitutionally a state responsibility, state estimates are essential.

Although per-pupil amounts may appear more manageable than state and national totals, they represent a substantial new investment over time.

Ultimately, states bear the responsibility for funding school infrastructure even though one might argue, in light of the huge backlog of unmet funding needs, that federal intervention is warranted. However, even if the federal government were to undertake a new role in funding school infrastructure, aid would likely be allocated on a state basis, requiring accurate state-level estimates.

For this study, data were collected from many sources, permitting development of a comprehensive database and cross-validation of data. Sources included policy and research literature; proprietary policy and research databases; a 50-state questionnaire; and a 5-year analysis of state legislative trends in funding school infrastructure, the latter based on Crampton's *Survey of State School Finance Legislation 1998* (1999). This publication offered insight into which states had recently conducted statewide school infrastructure assessments.

Proprietary policy and research databases included Lexis-Nexis; NCSLnet, an on-line electronic database of the National Conference of State Legislatures; and State Policy Archives, an on-line electronic database of the Council of State Governments. They proved to be rich sources of state reports and assessments that often have little or no circulation outside state government agency circles.

The questionnaire, distributed to state affiliates of the National Education Association, was completed in collaboration with the appropriate state agencies, such as state departments of education, and had a 100% response rate.

Several factors played a key role in determining a state's unmet funding, including current student enrollment, enrollment growth trends, age and condition of school facilities, and regional cost factors. High concentrations of poor students and aging facilities were also a factor for urban

school districts, which have higher total unmet funding needs. Although states with larger concentrations of urban school districts had larger state totals for unmet funding needs, that does not mean that rural states are “low need.”

The results of this research eclipsed that of earlier studies: A total of \$266.1 billion unmet funding needs were estimated—more than twice the 1995 estimate of the U.S. General Accounting Office. (See Table 1.)

State-by-State Results

Funding estimates varied dramatically across states, from \$220.1 million in Vermont to \$47.6 billion in New York. Although median state need was \$2.8 billion, the mean was much higher at \$5.3 billion, pointing to a cluster of states with extraordinarily high total funding needs. In fact, five states—California, New Jersey, New York, Ohio, and Texas—accounted for almost 50% of the total.

To place state totals in perspective, Table 1 lists estimates of unmet funding in per-pupil terms based on amortizing the total state funding need over 5 and 10 years, taking into account changes in enrollment over time. Because school infrastructure projects are usually financed over multiple years, amortization gives a more realistic sense of funding need. In addition, state assessments projected needs over this time span.

Over a 5-year period, unmet funding need ranged from \$271 per pupil in Florida to \$3,385 per pupil in Utah. Median per-pupil funding need was \$880, with the average somewhat higher, at \$1,095. Over a 10-year period, Florida and Utah also emerged at the extremes, with \$151 per-pupil needed in Florida, and \$1,841 in Utah. Median per-pupil funding need was \$489, and the 10-year average, \$608.

Because both Florida and Utah have rapidly growing student enrollments, the lower per-pupil funding need for Florida may appear puzzling at first glance. However, Florida has been more proactive with regard to state funding of school infrastructure than many other states, for example, passing the Smart Schools Act (House Bill 17) in 1997.

Although per-pupil amounts may appear more manageable than state and national totals, they represent a substantial new investment over time. For example, during the 1999–2000 school year, the National Education Association (1999) estimated that states and local school districts spent \$30.7 billion for capital outlay, or \$711 per student, on average.

Interest on school debt, which is usually associated with capital outlay or school infrastructure, was estimated at an additional \$8.7 billion, or \$202 per student, on average. Together, states and local school districts spent, on average, \$913 per pupil for school infrastructure and associated debt service in the 1999–2000 school year. Adding \$1,095 per pupil, using a 5-year amortization, would represent an increase in per-pupil funding of over 100%; whereas, under a 10-year amortization schedule, adding \$608 per pupil, would result in a 67% increase over current funding levels.

Table 1. Unmet Funding Need for School Infrastructure by State

State	Total Need (\$)	Per Pupil (\$)/5 yrs.	Per Pupil (\$)/10 yrs.
Alabama	1,519,210,061	398	221
Alaska	727,014,291	1,074	588
Arizona	4,748,568,494	983	536
Arkansas	1,761,701,495	758	422
California	22,000,000,000	704	386
Colorado	3,805,239,627	1,045	574
Connecticut	5,000,000,000	1,828	1,033
Delaware	1,046,354,648	1,836	1,022
Florida	3,300,000,000	271	151
Georgia	7,061,967,931	942	517
Hawaii	752,533,936	713	386
Idaho	699,469,537	517	278
Illinois	9,213,000,000	824	458
Indiana	2,477,797,613	486	269
Iowa	3,359,129,953	1,386	776
Kansas	1,793,241,845	774	430
Kentucky	2,441,607,196	749	418
Louisiana	3,104,098,619	812	454
Maine	452,064,540	448	253
Maryland	3,891,926,876	905	504
Massachusetts	8,919,014,500	1,822	1,025
Michigan	8,071,127,040	963	541
Minnesota	4,517,232,516	1,068	597
Mississippi	1,038,890,864	406	226
Missouri	3,475,160,989	759	423
Montana	901,492,663	1,101	607
Nebraska	1,608,849,896	1,119	622
Nevada	5,256,000,000	2,888	1,568
New Hampshire	409,511,478	403	226
New Jersey	20,709,650,065	3,247	1,810
New Mexico	1,410,624,747	778	422
New York	47,640,000,000	3,214	1,802
North Carolina	6,210,938,727	902	502
North Dakota	420,000,000	749	420
Ohio	20,900,000,000	2,302	1,291
Oklahoma	2,204,070,041	732	410
Oregon	2,407,425,974	859	475
Pennsylvania	8,465,134,387	927	521
Rhode Island	1,420,952,603	1,882	1,060
South Carolina	2,574,018,400	803	451
South Dakota	498,604,766	706	390
Tennessee	2,273,702,904	466	257
Texas	9,467,620,774	453	248
Utah	8,490,336,757	3,385	1,841
Vermont	220,090,007	425	239
Virginia	5,701,313,528	986	548
Washington	5,478,902,777	1,067	589
West Virginia	1,000,000,000	686	384
Wisconsin	4,762,337,059	1,087	608
Wyoming	530,888,665	1,125	614
Total	266,138,818,788		

Source: Crampton, F.E., Thompson, D.C., & Hagey, J.M. (2001). Creating and sustaining school capacity in the twenty-first century: Funding a physical environment conducive to a student learning. *Journal of Education Finance*, 27, 633–652.

Infrastructure Funding Needs: Urban Versus Rural States

Not all states have the same funding needs or start at the same place in terms of current expenditures on school infrastructure. Ohio and Wyoming represent contrasting examples of school infrastructure funding needs and expenditures. Ohio faces the dual challenge of high-poverty, urban school districts with aging facilities and high-poverty, rural school districts with insufficient property wealth to finance infrastructure needs through local bonds. Wyoming is a rural state with stable to declining student enrollments that faces the challenge of many remote and sparsely populated school districts and the associated diseconomies of scale.

Wyoming and Ohio also have reasonably current statewide assessments of school infrastructure (MGT of America, Inc., 1998; Ohio School Facilities Commission, 1999). Those assessments came as a result of litigation overturning their state funding systems, where, in both cases, the respective state supreme courts expressed concerns about inequities in school facilities (*Campbell County School District*, 1995; *DeRolph v. State*, 1997). Also, like many states, financing of school infrastructure needs in Ohio and Wyoming has historically rested largely at the local school district level.

Regardless of the size of the school district, written plans for the maintenance and care of school facilities are critical to prevent costly backlogs of deferred maintenance.

Ranking near the top with a total unmet funding need of \$20.9 billion, Ohio spent approximately \$1.8 billion, or \$1,054 per pupil, for school infrastructure during the 1999–2000 school year. Using a 5-year amortization, Ohio would need to more than triple its current expenditure level, adding \$2,302 per pupil. Over a 10-year period, it would need to double its efforts to add \$1,291 per pupil.

Near the bottom with a total unmet funding need of \$530.9 million, Wyoming spent \$1,201 per pupil—more than Ohio—for school infrastructure during the 1999–2000 school year. Using a 5-year amortization, Wyoming would need to double its efforts, adding \$1,125 per pupil. Over a 10-year period, the state would need to increase its effort by 50%, adding \$614 per pupil. (See Figure 1.) In contrast to its total state need, which appears quite small compared with a state like Ohio, Wyoming's per-pupil needs, for both the 5- and 10-year periods, are slightly above the average for all states, challenging the notion that rural states are “low-need” states. Nonetheless, Ohio's funding needs are large regardless of whether they are approached from the perspective of state totals, where it ranks third

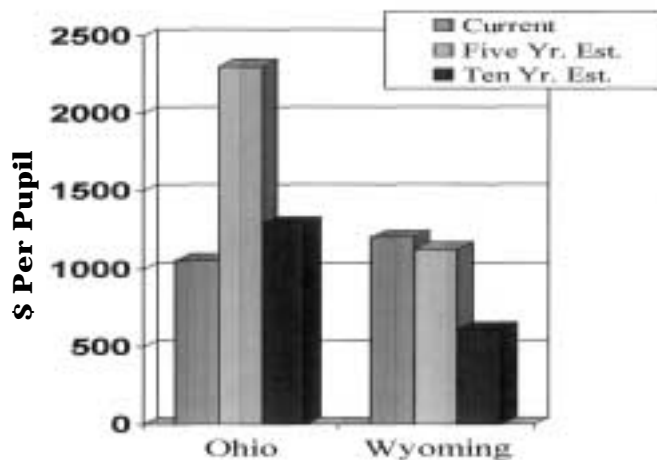


Figure 1. Contrasting unmet funding need for an urban vs. a rural state.

behind New York and California, or, from a per-pupil amount, which is over twice the mean for both 5- and 10-year amortization periods.

Conclusion and Recommendations

What can be done to improve the condition of America's schools? Local school districts and state and national organizations must continue to press policy makers at all levels to place funding of school infrastructure on the same plane as that of operating costs, but this is obviously a long-term endeavor. What can school business administrators do in the interim? Three recommendations follow:

- Recognize and support the role and responsibility of the school business administrator in planning for the local school district's short-term and long-term infrastructure needs;
- Insist on routine and preventative maintenance, which, in turn, should be outlined in the local school district's planning documents; and
- Communicate to school district employees and the community the critical importance of school infrastructure to student success.

Regardless of the size of the school district, written plans for the maintenance and care of school facilities are critical to prevent costly backlogs of deferred maintenance. Such plans should also anticipate longer-term infrastructure needs related to enrollment growth, shifts, and declines within the district. To support greater financial investment in infrastructure, school business administrators must set the tone in their district and community that facilities do affect student learning and, hence, are critical components of the educational process. ■

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