Center for American Progress

The Case for Federal Funding for School Infrastructure

By Laura Jimenez February 12, 2019

America's infrastructure is falling apart. The American Society of Civil Engineers (ASCE) recently estimated that it would take a $4.5 trillion investment to upgrade the country's roads; buildings; transportation, water, and energy systems; and other essential underpinnings. The ASCE has graded the country's infrastructure as an overall D+.[1] Infrastructure is the backbone of the U.S. economy, and the lack of investment in transportation infrastructure alone will cost the country $340 billion in lost business revenues from 2017 to 2023.[2] While most infrastructure discussions consider transportation, energy, and more, they too often ignore K-12 public schools, which welcome more than 50 million children and adults every day. K-12 public schools represent the nation's second-largest infrastructure sector.[3]

Considering the size of the K-12 sector, its exclusion from larger infrastructure analyses, including the aforementioned ASCE report and President Donald Trump's $200 billion infrastructure proposal, is puzzling.[4] Schools are economic drivers, as well-prepared students will earn $1 million more over their lifetimes than their less educated peers.[5] The condition of school buildings provides a crucial foundation for classroom learning that affects students and the American economy.

America's crumbling schools

The state of the nation's K-12 public schools is well-documented. For example, a 2016 report on the condition of school facilities that are funded and operated by the federal Bureau of Indian Education (BIE) shows that 5 of the 13 schools visited for the report are in condemned buildings, meaning that the extent of their disrepair is so great that they cannot be occupied.[6] Schools in Baltimore and Detroit have made headlines for their dilapidated conditions—from having no heat in the winter to being plagued with roaches, rats, and mold.[7] Puerto Rico's schools will likely take years to recover from recent hurricane devastation before being habitable.[8] A 2013 survey confirms data originally collected in 1996: that about half of America's public school buildings are in similar states of disrepair and insufferable condition.[9] As there has been little federal investment in school infrastructure since then, these conditions are likely worse today.[10]

The state of the schools in the BIE, Baltimore, Detroit, and Puerto Rico—as well as many other towns and cities across the country—make clear that any infrastructure bill must include funding to fix America's school buildings. Importantly, school infrastructure investment should not just address the extreme cases. Plenty of schools that are not yet crumbling must be repaired and upgraded so that they are not only modern and efficient but also equipped to meet students' broader needs.

A federal fix for schools

Fortunately, in the current Congress there appears to be a renewed appetite to seriously tackle America's infrastructure challenges. Immediately after the 2018 midterm elections, current House Speaker Nancy Pelosi (D-CA) announced that infrastructure would be one of the House's top priorities moving forward. More recently, Rep. Bobby Scott (D-VA), chair of the House Education and Labor Committee, made a significant effort to move forward the Rebuild America's Schools Act, which would invest $100 billion in school infrastructure.[11]

As Congress gears up to potentially take on the major issue of infrastructure investment, it is imperative that any infrastructure package include funding to repair and modernize public school buildings. In particular, Congress and the administration should address the following priorities.

Fix all crumbling and unsafe schools

Congress should dedicate most school infrastructure funds to address all schools in poor condition. This funding would address critical building systems that affect basic building operations, such as roofing, insulation, and plumbing, as well as heating, ventilation, and air conditioning.

This priority alone will cost a significant amount of money: Reports estimate that bringing all U.S. schools into good overall condition will cost approximately $200 billion.[12] Just fixing the public schools in Detroit that are deemed in urgent need of repair, for example, would cost at least $223 million; it would cost up to $500 million to bring all Detroit public schools to a state of good repair.[13] In Baltimore, it could cost up to $2.8 billion to address the city's backlog of school maintenance issues.[14]

Congress should allocate a portion of infrastructure funds for states to conduct an audit of school districts that lack official estimates of the cost to address deferred maintenance issues. This audit would also provide cost estimates for new construction in cases where school building conditions are so dire that they are beyond the scope of repair.

Modernize schools to meet the needs of the 21st century

"Modernizing schools" refers to fully renovating systems, building interior finishes, and updating technology.[15] While all students deserve schools that are modernized and capable of supporting the latest in education programming, elevating all schools to this state will take time and continued funding from the federal government.

Importantly, modernizing schools would improve quality of life for students and teachers.[16] Examples of these projects include bringing broadband to all schools; providing functioning computers to every classroom; and ensuring that furniture, fixtures, and school spaces facilitate teaching and learning for students with various needs—including students with disabilities. In addition, these renovations must support students' health and well-being by providing adequate space for meals, health facilities, after-school care, and extracurricular programming.

As part of these funding provisions, Congress should mandate that states and districts identify how to spend modernization funds so that they are equitably distributed across school districts. For example, District of Columbia Public Schools (DCPS) provides information on its website about its own capital improvement plan, known as the DCPS School Modernization process.[17] This process uses four considerations, in descending order of importance: equity; student demand; neighborhood population; and building condition.[18] Equity in particular assesses the percentage of schools in the neighborhood that have been modernized, as well as the percentage of enrolled students who are at-risk, have disabilities, or are English language learners.

Finally, modernization should also ensure that transportation pathways to and from schools are safe. The Safe Routes to Schools (SRTS) program, a $180 million annual grant competition run by the U.S. Department of Transportation, currently supports this particular priority but is severely underfunded given the need.[19] Projects funded by SRTS dollars improve the ability of students to walk and ride bicycles to school, including by improving sidewalk conditions and traffic patterns, reducing vehicle speed, and establishing bicycle lanes. These are vital projects: Each year, about 6,000 pedestrians and bicyclists are killed by traffic-related accidents.[20] While these data do not disaggregate the fatalities for students in particular, other data show that about 300 of the pedestrians and bicyclists killed every year are students, while another 15,000 of those injured are students.[21]

Make schools environmentally sustainable

Modernizing schools should also include making them green so that their energy consumption and carbon footprints are reduced, as well as improving the health of building occupants.

The U.S. Department of Education, through its Green Ribbon Schools award program, defines a "green school" as one that meets three criteria: 1) it reduces environmental impacts such as waste, water, and energy consumption; 2) it improves health and wellness by promoting a healthy physical environment, including by improving air and water quality; and 3) it provides effective environmental and sustainability education.[22]

Moreover, evidence shows that alterations to make schools green also reduce operating costs. For example, Thurgood Marshall Elementary School in Philadelphia has a "superior" rating on Energy Star, which means that it performs better than 75 percent of other buildings on energy savings.[23] This rating amounts to 28 percent savings on energy costs when compared with school buildings nationwide.[24] Most of the school's efforts were specific to operations and maintenance; however, students pitched in as monitors to supervise the classroom's green practices, energy savings, and recycling.

Provide professional development support to facilities managers and staff so that they can operate and maintain upgraded systems

Modern building systems are often technology-based, and their maintenance can require specific technical knowledge, training, and certification or licensure.[25] Facilities staff typically engage in general administration and building management—which often includes budgeting—and operations and maintenance, which addresses the daily and long-term care of the building and its systems. Staff also are responsible for energy, utility, and environmental stewardship—which includes electricity and plumbing—as well as planning, design, and construction of repairs or modernizations.[26]

To effectively serve in these capacities, school facilities staff need frequent and up-to-date professional development. School infrastructure legislation should earmark a portion of funds to provide regular training and development for school facilities professionals to ensure that their knowledge and skills are a match for the systems they must maintain.

Establish an ongoing role for the federal government to invest in school infrastructure

The federal government provides approximately 10 percent of all funding for K-12 education but nearly no money for school operations, even though public schools are the second-largest facilities sector.[27] While the federal government spent about $170 billion on highways and $110 billion on waterways in 2017, it generally only supports 0.2 percent of capital costs for schools, with states providing 18 percent of the share and local governments providing 82 percent.[28] Since most local school funding is driven by property taxes, the ability of a school district to pay for capital improvements and investments is directly tied to the wealth of its surrounding community. When some of the lowest-income communities in the country struggle the most with crumbling schools, it is clear that a federal role in school infrastructure is a matter of equity.

The federal government should also play a greater role in making sure that there is up-to-date information on the condition of K-12 school buildings, eliminating the need for expensive, ad hoc audits on this topic. Federal surveys of K-12 school infrastructure conditions first occurred in 1999 and were most recently updated in 2013.[29] These reports provide limited data on school staffs' perception of building conditions. As part of its research and information collection role, the U.S. Department of Education should regularly publish a report on school conditions that describes the current state of affairs and investments needed to ensure that all schools are in good condition.

Conclusion

Just as transportation and energy infrastructure are holding the country back from economic growth that would benefit all Americans, the conditions of K-12 public schools are a drag on its ambition to once again be a leader in educational attainment worldwide. As leaders at the federal level debate how to best address the country's substantial infrastructure needs, it is imperative that improving and modernizing K-12 schools is part of any new infrastructure investment—and is an ongoing priority.

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