

Education Policy: 21st Century Schools Bond Initiative

# Benefits of Modernizing School Facilities

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For research on how students and teachers are affected by deteriorating school facilities, see "The Impact of School Buildings on Learning" (M-DCPS Research Services, Information Capsule Vol. 1204, Aug. 2012).



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## Facility Quality Tied to Positive Outcomes Research Shows Gains in Student Achievement, Residential Home Values

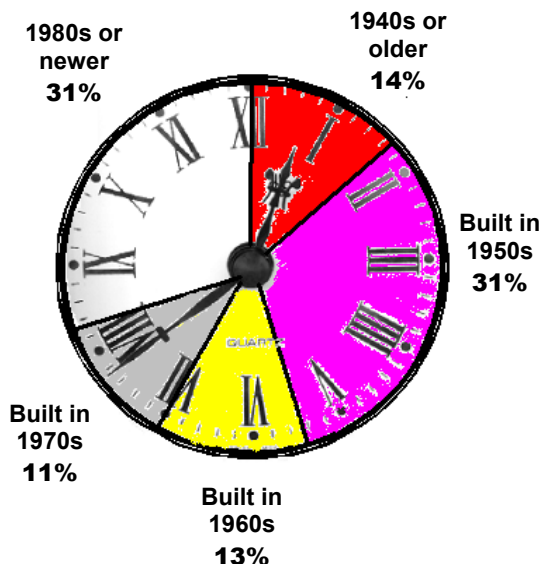
A Miami-Dade school bond referendum on the November ballot, if approved by voters, will have a major impact on upgrading school facilities across the county. Besides the broad economic benefits associated with construction, national research consistently links school building upgrades to measurable, positive impacts on both students and the community. This policy brief summarizes U.S. research in relation to local needs in Miami-Dade.

As illustrated in the graphic below, **58% of all campus buildings are over 40 years old** (built in 1960s or earlier). Aging schools not only face increased repair and maintenance needs but require upgrades to accommodate new instructional technologies and modern educational programs. Voters last approved school construction bonds in 1988, primarily to create new campuses and add buildings to relieve overcrowding. As the 1988 bonds are phased out, the 2008-13 facilities survey identified a backlog of \$1.75 billion in needed repairs and modernization.

The next page cites U.S. research findings that link school facility upgrades to a wide array of impacts, including student attendance and academic gains, teacher job satisfaction and retention, increased residential property values, equity across communities, and reduced negative health issues arising from poorly maintained buildings.

### WHEN IS THE "RIGHT TIME" FOR REPAIR, RENOVATION, & MODERNIZATION?

#### Age of Individual Buildings at 366 Miami-Dade K-12 Campuses



Source: Miami-Dade County Public Schools 2008-2013 Educational Plant Survey (approved May 21, 2008).

The Miami-Dade County School Board proposed a bond issue for \$1.2 billion in school repairs and improvements for public vote on Nov. 6, 2012. Timing was based on the following stated factors:

- **Upgrade technology to 21st Century standards** at hundreds of aging school facilities.
- **Address a large backlog of deficiencies** identified in the long-range building plan.
- **Create jobs in architecture, engineering, and construction** at a time of economic vulnerability, low construction costs, and historically low interest rates.
- **Minimize tax impacts** by phasing in new bonds as the 1988 school bond issue is retired, with an estimated increase per home of \$5 in first year.

## RESEARCH FINDINGS

**“The research is conclusive: school facilities have a measurable impact on the achievement of our children....** While factors such as teachers and parental involvement have an indisputable impact on student achievement, well-designed school facilities—the places where our children spend the majority of their waking hours—can significantly bolster whatever human inputs our students receive. On the other hand, poorly designed or maintained buildings threaten to undermine every other effort we may put into our educational system.”

**Issue Brief: School Facilities and Student Achievement** (Center for Innovative School Facilities, 2011)

“In a set of 20 studies analyzed by 21st Century School Fund, all but one study showed a positive correlation between the achievement of students and the condition of the school facility once student demographic factors were controlled for.... **The overwhelming results of these studies show how counterproductive it would be to push for increased student achievement without providing school facilities that integrally support such achievement.**”

G. Cheng, S. English, & M. Filardo, **Facilities: Fairness & Effects** at pp. 3-5 (submission on behalf of 9 organizations to the US Dept. of Educational Excellence & Equity Commission, 2011)

## ACADEMIC GAINS

“The research on school building conditions and student outcomes finds a consistent relationship between poor facilities and poor performance: **when school facilities are clean, in good repair, and designed to support high academic standards, there will be higher student achievement, independent of student socioeconomic status.**”

**Growth and Disparity: A Decade of US Public School Construction** at p. 3 (Building Educ. Success Together, 2006)

## JOBS & ECONOMY

“These expenditures will generate economic impacts estimated to sustain 18,436 jobs during the course of the investments....[plus] permanent jobs arising from the improved educational outcomes....”

The Washington Economics Group, Inc., **The Economic Development Impacts of the Proposed General Obligation Bond (GOB) to Miami-Dade County** at pp. 1-2 (analysis commissioned by M-DCPS, Aug. 2012)

## PROPERTY VALUES

“We find that school construction had **substantial positive effects on home prices** in affected neighborhoods, and led to increases in the population of families with children attending public schools. **These effects coincided with increases in student reading scores....** A survey...suggests that both physical and motivational changes play an important role.”

C. Neilson & S. Zimmerman, **The Effect of School Construction on Test Scores,**

“Our results indicate that...**passing a referendum causes immediate, sizable increases in home prices,** implying a willingness to pay on the part of marginal homebuyers of \$1.50 or more for each \$1 of capital spending. These effects do not appear to be driven by changes in the income or racial composition of homeowners, and the impact on test scores appears to explain only a small portion of the total housing price effect.”

S. Cellini, F. Ferreira, & J. Rothstein, **The Value of School Facility Investments: Evidence from a Dynamic Regression Discontinuity Design** at p. 215 (The Quarterly Journal of Economics 2010)

## TEACHER RETENTION

**“[T]he benefits of facility improvement for [teacher] retention can be equal to or even greater than those from pay increases.** Furthermore, a major facilities improvement is likely to be a one-time expense, [and] last for many years....”

J. Buckley, M. Schneider, & Y. Shang, **The Effects of School Facility Quality on Teacher Retention in Urban School Districts** (National Clearinghouse for Educational Facilities, 2004)

“A growing body of research suggests the physical condition of public school facilities and the availability of **resources, including technology, impact teachers’ job satisfaction.**”

D. Stallings, **Public School Facilities and Teacher Job Satisfaction** (E. Carolina Univ. 2008)

## HEALTH & ATTENDANCE

“Research also indicates that **poor facilities affect the health and productivity (attendance) of teachers** and make retention of teachers difficult (especially for schools with a condition grade of “C” or less).... Another effect of poor school facilities is the **detrimental impact they have on students’ basic health.**”

G. Cheng, S. English, & M. Filardo, **Facilities: Fairness & Effects,** *supra* at p. 6.