# The Commonwealth Assessment of Physical Environment (CAPE) revisited

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#### Why?

- Virginia Legislature
- Building conditions in Virginia
- Building conditions and student outcomes

CHAPTER 664An Act to amend Chapter 116 of the Acts of Assembly of 1948, which provided a charter for the City of Richmond, by adding a section numbered 6.15:3, relating to equal educational opportunities; school infrastructure. [S 750]

- $\int 6.15:3$ . School buildings and infrastructure modernization.
- (a) Not later than January 1, 2019, the mayor shall formally present to the city council a fully funded plan to modernize the city's K-12 educational infrastructure consistent with national standards or inform city council such a plan is not feasible. In fulfilling the duties herein, the mayor shall consult with the school board and city council, consider cost savings available in state or federal law, and further provide an opportunity for public participation.
- (b) Such fully funded plan required in subsection (a) shall not be based on the passage of new or increased taxes for that purpose.
- (c) Nothing herein shall alter powers previously given to the school board.
- (d) Once the mayor has complied with subsection (a), the city council shall have 90 days to take such action as it deems appropriate.

#### Expanding the scope: Virginia Senate Subcommittee on School Facility Modernization

• Senate bi-partisan sub committee looking at the concerns throughout the commonwealth related to school facility conditions

#### Senate Sub Committee - bipartisan

#### (2) INSTEAD, WE NEED TO URGENTLY EDUCATE OUR PEERS AND OUR PEOPLE IN THESE THREE AREAS:

- (A) Obsolete, dysfunctional school facilities significantly reduce educational opportunities and thus the achievement level of school students. This proven statistical fact is not yet fully appreciated even though Virginia Tech is home to one of the world's leading authorities on the subject and his students. We need to hear from them. The above referenced previous studies tangentially discussed this situation. We need to get the full picture. And we will at our first committee hearing.
- (B) In the famed case of *Brown v. Board of Education II*, 349 U.S. 294, 300 (1955), the Justices declared that "problems...arising from the physical condition of the school plant" alone could deny equal educational opportunities in Virginia, as we were part of that case. Their educational analysis applies to all children. After 63 years, as a lawyer I want to know the following: Has our great state lived up to our commitments under *Brown II*? No previous state body has asked this question. The answer is long overdue. This will be the focus of our second committee hearing.
- (C) Finally, the third basic prong is the issue of financing of school construction. By necessity this also requires looking into the future of instruction, thus showing why both as referenced above are joined at the educational hip. This will be the focus of our third formal hearing.

CANCILICIAN

## Bill Stanley's school plan shuffles the partisan deck

- The heart of the plan is for the state to issue \$3 billion in general obligation bonds as a down payment on fixing the commonwealth's decrepit public school infrastructure.
- Supreme Court's decision in South Dakota v. Wayfair, which opened the door to states acting on their own to collect sales taxes from online purchases
- Could result in Virginia reaping as much as \$300 million in new revenue
- propose to divert half of that potential windfall to help finance the school reconstruction bonds.

#### How old are schools in Virginia (2013)

- 2068 schools
- more than half are 50 years or older: 1,077, or 52 percent.
- Some 614 or 29.6 percent are 60 or more years old.
- The oldest dates from 1837 New London Academy Elementary in Bedford County.
- The second oldest is Appomattox Middle School, built in 1908.
- In all, 13 percent of the state's schools are so old that the great-grandparents or even great-grandparents of today's students could have attended them.
- They are in 87 of the state's 133 localities, which means 65 percent of the state's counties and cities have at least one school that pre-dates 1949.

• Who has the most old schools? Richmond, with an astounding 16 schools that pre-date 1950. No wonder the issue of school modernization has roiled the city's politics. In fact, seven of those schools pre-date America's involvement in World War I. Who has the second most number of pre-1950 schools? Probably not who you think. Fairfax County, with 13.

## Metro areas may have the most number of old schools, but many rural localities have a disproportionately higher share of old schools.

- Hits rural areas the most, because they have the least ability to pay for upgrading school buildings. For instance:
- In Patrick County, five of the county's seven schools pre-date the 1950s. Those five were all built in the 1930s; the two others were built in 1952 and 1970.
- In Page County, five of the county's nine schools pre-date the 1950s. The oldest of those was built in 1928.
- In Floyd County, three of the county's five schools pre-date the 1950s. Somehow in 1939, the county managed to build three schools all at once. The other two were built in 1952, and 1962, which means that every school in the county is more than a half-century old.

#### Building Conditions & Student Achievement

- "Facilities have an important, measureable impact on educational outcomes." Roberts
- "Facility conditions significantly predicted [affected] the delivery of instruction after controlling other extraneous or plausible variable." Specifically, Duyar's research determined that facility condition explained 43 percent of the variance in the quality of the delivery of instruction. As referenced by Roberts
- "Crumbling infrastructure in American K-12 classrooms isn't just a political football. It also presents physical and psychological dangers for students and teachers alike." *Erin McIntyre*, 2016

  (https://www.educationdive.com/news/decaying-school-buildings-have-physical

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#### Penn State Evaluation and Education Policy Analysis

- "A growing body of research has found that school facilities can have a profound impact on both teacher and student outcomes. With respect to teachers, school facilities affect teacher recruitment, retention, commitment, and effort. With respect to students, school facilities affect health, behavior, engagement, learning, and growth in achievement. Thus, researchers generally conclude that without adequate facilities and resources, it is extremely difficult to service large numbers of children with complex needs."
- Penn State Evaluation and Education Policy Analysis (https://sites.psu.edu/ceepa/2015/06/07/the-importance-of-school-facilities-in-improving-student-outcomes/)

## Children in Deficit School Buildings Cornell Research: Lorraine E. Maxwell featured

- Maxwell also found that, regardless of the income levels of the students, deficient school building condition contributed statistically to low academic outcomes. "One explanation for these findings might be that students felt if society didn't care about their school building, it didn't care about them," she says. "School building condition had a negative effect regardless of composition of student body, but the effects for low income students perhaps represents an extra burden. We can fix the building condition fairly easily and remove that contribution to poor academic outcome. My point is that we already know kids from low-income, minority communities have a lot of strikes against them. Why add another one?"
- (https://research.cornell.edu/news-features/children-deficient-school-buildings)

#### Tennessee Advisory Commission on Intergovernmental Relations 2003

- "School facility factors such as building age and condition, quality of maintenance, temperature, lighting, noise, color, and air quality can affect student health, safety, sense of self, and psychological state. Research has also shown that the quality of facilities influences citizen perceptions of schools and can serve as a point of community pride and increased support for public education."
- "The socio-economic status of students, the most important external factor in learning, cannot be controlled. Time in learning, the most direct internal factor, can be controlled. Because the physical environment has an important influence on time in learning, and on other indirect, but significant, factors in the learning process, policymakers should consider a building-based change process for school improvement.
- (https://www.tn.gov/content/dam/tn/tacir/documents/SchFac.pdf)

#### Oregon Center for Innovative School Facilities

• While factors such as teachers and parental involvement have an indisputable impact on student achievement, school facilities — the places where our children spend the majority of their waking hours — can significantly weaken or bolster whatever human inputs our students receive.

#### What?

• Commonwealth Assessment of Physical Environment

#### Factors considered in the current CAPE

- Age
- Indoor Air Quality
- Windows
- Floor covering
- Heat/AC
- Lighting
- Paint cycle interior/exterior
- Cleaning sweep, mop, graffiti
- Roof condition
- Science Lab

- Classroom furniture condition
- Wall color
- Wi-Fi
- Student computer access
- Electrical outlets to support technology
- Safety features generally
- What's missing?

#### How?

Doctoral Students