

"Schools can be the focal point of community improvement, not just institutions of learning." – Stuart Butler, the Brookings Institution

STUDENTS' STRESS VULNERABILITY

At frk architects + engineers, we spend most of our day's thinking about schools. As our primary design focus, we design our buildings directly with educators and community members. The schools we build let us expand in our own creativity, while challenging us to design unique spaces that support different learning styles.

It is no secret that students with stressful lives outside of their school day perform lower academically than students who are not experiencing the same stresses. The Center for Disease Control measures ACE's or "Adverse Childhood Experiences" to address environments or encounters that could lead to children experiencing trauma. ACE's provide a national standard for monitoring experiences in people's lives to avoid the subjectivity of the word "stress." That being said, there is no universal standard that can accurately judge any and all persons' standard of well-being.

Some examples of ACE's are children experiencing violence or neglect, food insufficiency, or substance abuse from a guardian. Different ACE's are apparent in different socioeconomic communities. Higher socioeconomic communities report the highest levels of parental put downs and lower socioeconomic communities report higher incidences of neighborhood violence, both examples of an ACE (Webster, 2022). "At the school rate, lower ACE scores strongly correlate with higher graduation rates, college attendance, and test scores" (Baldwin, 2017). Conversely, a student experiencing more ACE's has a lower rate of success in academic understanding.

We, mere mortals, are students for life whether we like it or not. Our most fundamental and vulnerable years are our nurtured years as we are growing up. The greatest level of learning in students happens between the ages of 0 - 10. Janacsek's 2012 research indicates that children ages 0 - 10 learn more than at any other time in their lives. The research also shows that children ages

6 - 10 experience implicit skill learning, and they are more efficient at this than any other age group. Implicit skill learning is the foundation for acquisition of motor, perceptual, and cognitive skills and is arguably a critical developmental stage of learning in a student's life. At these ages, it is more important than ever to maximize a student's learning potential. If ACE instances are directly blocking students from learning during the school day, how can the schools help?



HOW CAN SCHOOLS HELP?

Public schools reflect the philosophy of their surrounding communities. The state of the physical building often reflects the financial dedication a township has allotted for its schools. The curriculum and teachings are directly influenced by local and state government ordinances. Organized by the community and the regional governments, schools are what we make of them. In the eyes of an architecture firm, a school is a creative and flexible building, giving us the opportunity to stretch our creative muscles. Realistically, a school is a community of minds with the purpose of creating a safe physical and emotional space for students to thrive.

The physical form of the school can address some ACEs (Adverse Childhood Experiences) in direct and indirect ways.



Direct Ways:

- Family consumer science classrooms having a single access, exterior door for the public after school hours to make use of the laundry and cooking facilities for members of the community needing those services.
- Community clinics have been incorporated into school buildings making it normal for students to receive health services during their school day. This also allows for an easier practice for parents needing to get their child/children to the doctor's office. This creates a location-specific "hub" for multiple community services. These clinics also help promote health education and an example of a professional path in healthcare.
- Having counseling services as a physical entity and location within a student's school provides direct access and support to a student experiencing stress.
 When these counseling services are moved outside of the administrative suite; for example, to a library, they see higher student utilization.

Indirect Ways:

Schools can provide learning spaces that serve all learning styles. These spaces can provide a variety of environments for different learners.
 The introverted students could be drawn to quiet, reading corners, while the extroverted students can utilize larger, open spaces for group activities.
 These spaces are of highest priority to the students in the age range of 6 – 10 during the peak of implicit skill learning. Classrooms can be large enough and designed in a way to provide both.



- Allowing students to design their own spaces directly impacts student learning. Schools have the ability to provide spaces and furniture that is flexible and adaptable by any of its users.
- The interior of school spaces can have a variety of adaptable lighting to correlate with natural lighting cycles, as well as cater to different learning spaces and styles. For example, less lighting and cooler temperatures are often preferred for sensory deprivation spaces in elementary schools.

IS THIS THE SCHOOL'S RESPONSIBILITY?

Should schools be the entity shouldering students' stresses shown throughout their communities? Schools act as the active guardian over students during the day and schools can be designed to combat a variety of ACEs. It is up to the community to utilize the physical attributes of their school buildings for these purposes. The voting community is a reflection of the standard of well-being the local area has deemed acceptable to live by. To our team of designers, schools represent our careers, our purpose, and our creative outlet. Really though, schools are a mirror to the economic and cultural priorities of the communities where they reside.

Schools are never just a building, not even to its designers. We view it as a creative way to bolster the incoming generations for success. The building is not designed solely by architects and engineers but by community members from the area wanting to be involved in the new development.



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